Closeout Report for IHSS Group NE-1

(Ponds B-1 [IHSS NE-142.5], B-2 [IHSS NE-142.6], and B-3 [IHSS NE-142.7])

Approval received from the U.S. Environmental Protection Agency

May 12, 2005.

Approval letter contained in the Administrative Record.

May 2005

Closeout Report for IHSS Group NE-1

(Ponds B-1 [IHSS NE-142.5], B-2 [IHSS NE-142.6], and B-3 [IHSS NE-142.7])

May 2005

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ENCLOSURE

CD Containing Standardized Real and QC Accelerated Action Data

ACRONYMS AND ABBREVIATIONS

AAESE	Accelerated Action Ecological Screening Evaluation
AL	action level
AOC	Area of Concern
AR	Administrative Record
ASD	Analytical Services Division
BO	Biological Opinion
BZ	Buffer Zone
CAD/ROD	Corrective Action Decision/Record of Decision
CAS	Chemical Abstracts Service
CD	compact disc
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	contaminant of concern
CRA	Comprehensive Risk Assessment
cy	cubic yard
DOE	U.S. Department of Energy
DQA	Data Quality Assessment
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
ER RSOP	Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation
ERA	Ecological Risk Assessment
ft	foot
ft^2	square foot
FY	Fiscal Year
HEC	Hydraulic Engineering Center
HPGe	high-purity germanium
HRR	Historical Release Report
IA	Industrial Area
IABZSAP	Industrial Area and Buffer Zone Sampling and Analysis Plan
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
IM/IRA	Interim Measure/Interim Remedial Action
IMP	Integrated Monitoring Plan
ISOCS	In-Situ Counting System
K-H	Kaiser-Hill Company, L.L.C.
LCS	laboratory control sample
ug/kg	micrograms per kilogram
ug/L	micrograms per liter
MDL	method detection limit
mg/kg	milligrams per kilogram
MS	matrix spike

MSD	matrix spike duplicate
N/A	not applicable
NFAA	No Further Accelerated Action
NLR	No Longer Representative
OPWL	Original Process Waste Line
PARCCS	precision, accuracy, representativeness, completeness, comparability, and sensitivity
PBA	Programmatic Biological Assessment
PCB	polychlorinated biphenyl
pCi/g	picocuries per gram
PCOC	potential contaminant of concern
PMJM	Preble's meadow jumping mouse
POE	Point of Evaluation
ppm	parts per million
QC	quality control
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS or Site	Rocky Flats Environmental Technology Site
RI/FS	Remedial Investigation/Feasibility Study
RIN	report identification number
RL	reporting limit
RPD	relative percent difference
RSOP	RFCA Standard Operating Protocol for Routine Soil Remediation
SAP	Sampling and Analysis Plan
Sbd	sample beginning depth
SD	standard deviation
Sed	sample ending depth
SOR	sum of ratios
SSRS	Subsurface Soil Risk Screen
SVOC	semivolatile organic compound
SWD	Soil Water Database
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
V&V	verification and validation
VOC	volatile organic compound
WEPP	Water Erosion Prediction Project
WRW	wildlife refuge worker

EXECUTIVE SUMMARY

Individual Hazardous Substance Site (IHSS) Group NE-1 consists of Pond B-1 (IHSS NE-142.5), Pond B-2 (IHSS NE-142.6), and Pond B-3 (IHSS NE-142.7). The general types of material that have been routinely released to the B-series drainage during the history of Rocky Flats Environmental Technology Site (RFETS or Site) include the following: treated sanitary effluent, treated and untreated process waste, treated and untreated decontamination laundry wastewater, cooling tower blowdown, footing drain flows, and stormwater runoff. Approximately 40,500 cubic yards (cy) of sediment and soil were removed during Environmental Restoration (ER) remediation activities. Following the excavation of contaminated pond sediment and soil, results of confirmation sampling indicated there were no exceedances of Rocky Flats Cleanup Agreement (RFCA) wildlife refuge worker (WRW) action levels (ALs) and cleanup objectives had been met.

Preaccelerated action data for IHSS Group NE-1 indicated radionuclides existed at activities greater than RFCA WRW ALs in IHSS Group NE-1 sediment and soil. These historical exceedances were reported in Ponds B-1, B-2, and B-3.

Accelerated action sampling began with the collection of biased soil characterization samples at 65 locations. These samples were analyzed for radionuclides only. The characterization samples were collected to determine the lateral extent of radiological contamination present in the study area and define initial excavation boundaries. Results of characterization sampling indicated the presence of radionuclides at activities greater than WRW ALs at 30 locations.

Following the excavation of sediment in Ponds B-1, B-2, and B-3, in-process and confirmation samples were collected. All samples were analyzed for radionuclides and approximately 11 percent of the samples were analyzed for metals, polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), and volatile organic compounds (VOCs). Analytical results indicated activities at only four sampling locations exceeded WRW ALs for radionuclides. Following overexcavation of these 4 locations, all confirmation samples indicated results were below WRW ALs.

Results of the accelerated action justify No Further Accelerated Action (NFAA) for IHSS Group NE-1. Justification is based on the following:

- The source area for contamination was removed. All sediment in Ponds B-1, B-2, and B-3 were excavated and shipped offsite for disposal.

- All residual contaminant activities and concentrations, as determined by confirmation sampling following excavation activities, are below RFCA WRW ALs.

- Reconfiguration of Ponds B-1, B-2, and B-3 included backfilling the excavations with clean fill material and regrading to create a low-energy environment that includes oxbows, backwater eddies, meandering channels, and establishment of wetlands in

each of the former ponds. The thickness of clean fill below the centerline of the flow channel varies from approximately 4 ft to 16 ft throughout the ponds. Establishment of this low-energy environment will serve to minimize erosion and the potential mobilization of residual contaminants.

- Predictions of contaminant migration based on the integration of the Water Erosion Prediction Project (WEPP) (USDA 1995) and Hydraulic Engineering Center (HEC)-6T (Thomas 1999) models are conservative. Site empirical data, however, indicate contaminant migration to be less than model predictions.

Potential surface water impacts and water quality monitoring requirements will be addressed in the Comprehensive Risk Assessment (CRA) and Remedial Investigation/Feasibility Study (RI/FS). Ecological effects will be evaluated in the Accelerated Action Ecological Screening Evaluation (AAESE). The Integrated Monitoring Plan (IMP) will address the need for further groundwater monitoring. Groundwater remediation alternatives will be addressed in the Groundwater Interim Measure/Interim Remedial Action (IM/IRA).

The need for and extent of any more general, long-term stewardship activities will also be analyzed in the RI/FS and proposed as part of the preferred alternative in the Proposed Plan for the Site. Institutional controls and other long-term stewardship requirements for the Site will ultimately be contained in the Corrective Action Decision/Record of Decision (CAD/ROD).

This Closeout Report and associated documentation will be retained as part of the Rocky Flats Administrative Record (AR) file. The specific long-term stewardship recommendations will also be summarized in the Rocky Flats Long-Term Stewardship Strategy.

1.0 INTRODUCTION

This Closeout Report summarizes characterization and accelerated action activities conducted at Individual Hazardous Substance Site (IHSS) Group NE-1 at the Rocky Flats Environmental Technology Site (RFETS or Site) in Golden, Colorado. IHSS Group NE-1 consists of the A-, B-, and C-series retention ponds; however, this Closeout Report addresses only these sites covered under Environmental Restoration (ER) Rocky Flats Cleanup Agreement (RFCA) Standard Operating Protocol (RSOP) for Routine Soil Remediation Notification #04-11 (DOE 2004a) which included the following:

- Pond B-1 (IHSS NE-142.5);
- Pond B-2 (IHSS NE-142.6); and
- Pond B-3 (IHSS NE-142.7).

Ponds A-1 through A-4, B-4 and B-5, and C-2, are currently being evaluated by the Department of Energy (DOE) to determine the pathforward for these areas. Pond C-1 received a No Further Accelerated Action (NFAA) determination on June 17, 2004 (DOE 2004b). The location of IHSS Group NE-1 is shown on Figure 1.

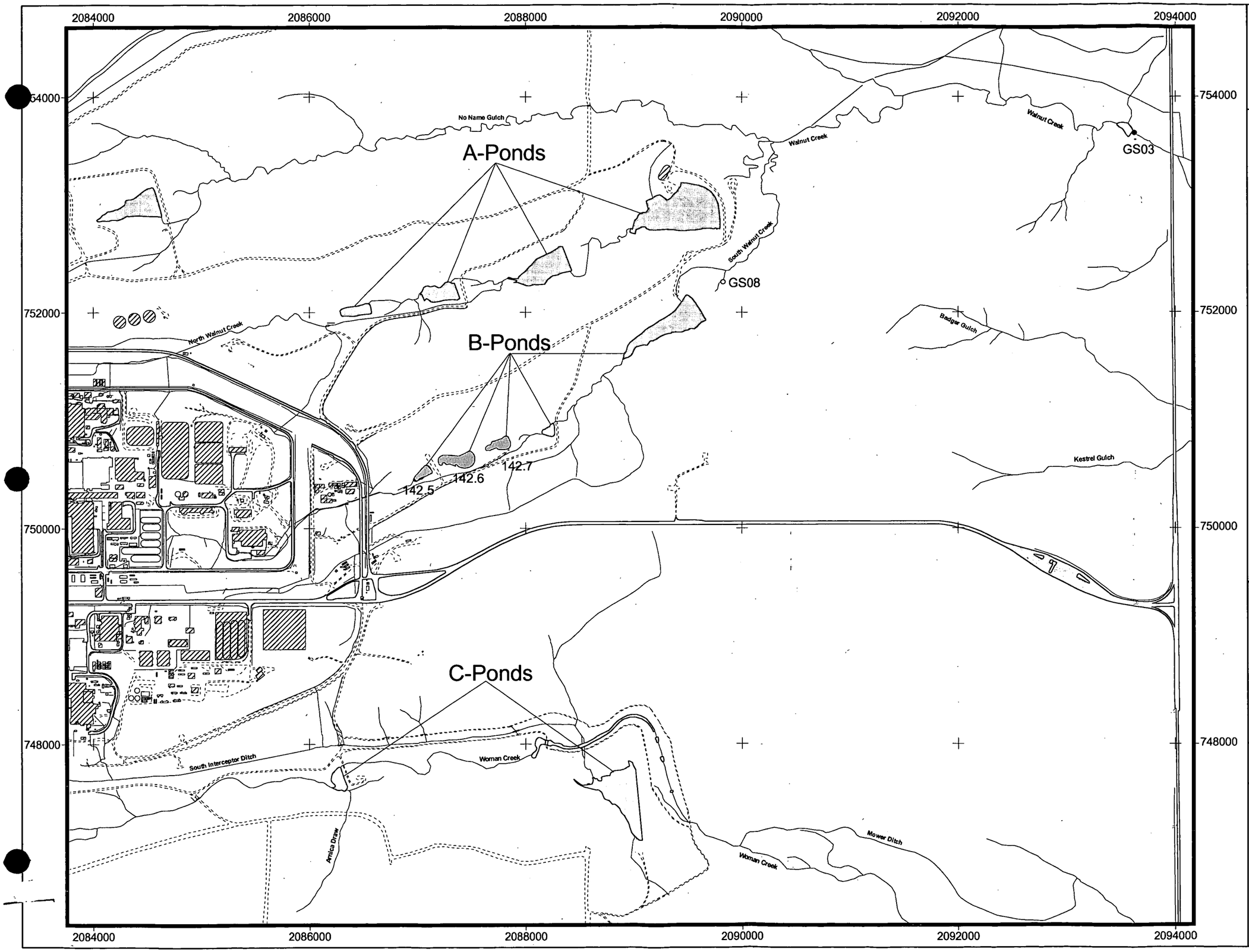
Accelerated action activities were planned and executed in accordance with the Industrial Area (IA) and Buffer Zone (BZ) Sampling and Analysis Plan (SAP) (IABZSAP) (DOE 2004c) and the ER RSOP (DOE 2003a). Notification of the planned activities found in ER RSOP Notification #04-11 (DOE 2004a), was approved by the U.S. Environmental Protection Agency (EPA) on December 8, 2004 (EPA 2004). Modifications to Ponds B-1, B-2, and B-3 and restoration of wetlands were conducted and documented in another project.

The wetlands in the area of the B-ponds were delineated by the U.S. Army Corps of Engineers (USACE) in 1994 as part of a wetland study at the Site (USACE 1994). The project was conducted as a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) action and, therefore, wetland issues were under the jurisdiction of EPA per the requirements of the Memorandum of Agreement (DOE 1996). In addition, the B-series ponds are located in the habitat of the federally listed, threatened Preble's meadow jumping mouse (PMJM) (*Zapus hudsonius preblei*). The PMJM and other threatened or endangered species issues were addressed in the Programmatic Biological Assessment (PBA) (DOE 2004d, 2004e) written for Site closure activities. The U.S. Fish and Wildlife Service (USFWS) issued a Biological Opinion (BO) covering the project activities (USFWS 2004).

Ecological effects will be evaluated in the Accelerated Action Ecological Screening Evaluation (AAESE) but are not reported here because all sediment was removed from Ponds B-1, B-2, and B-3. In addition, ecological effects will be evaluated in the ecological risk assessment portion of the sitewide Comprehensive Risk Assessment (CRA). The CRA will include analytical results of confirmation sampling from the Ponds B-1, B-2, and B-3 remediation to determine whether additional remediation is warranted.

Figure 1

IHSS Group NE-1
A, B, and C-Series Ponds
Location Map



Key

- Ponds B-1, B-2, and B-3
- Pond
- Building/structure
- Demolished structure
- Paved area
- Dirt road
- Stream, ditch, or other drainage feature
- Surface water Point of Compliance (POC) station
- Surface water Point of Evaluation (POE) station

N
W E
S

400 0 400 800 Feet

Scale = 1:10,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for:

Date: 05-17-05

KAISER•HILL COMPANY

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This report contains the information necessary to demonstrate attainment of cleanup objectives and final closure of IHSS Group NE-1 including the following:

- Site characterization information
  - Description of site characterization activities, and
  - Site characterization data, including data tables and maps;
- Site accelerated action information
  - Description of accelerated action, including the rationale for the action,
  - Map of the project area and dates and durations of specific remedial activities, and
  - Photographs documenting site characterization, remediation, and reclamation activities;
- Confirmation sampling data, including data tables and location maps, as well as a comparison of the confirmation data to applicable cleanup goals;
- Description of deviations from the ER RSOP (DOE 2003a);
- Description of the Subsurface Soil Risk Screen (SSRS);
- Description of near-term stewardship actions and long-term stewardship recommendations;
- Disposition of wastes;
- Site reclamation information;
- Table of No Longer Representative (NLR) locations (and associated sample numbers) that have been remediated. These data will be used to mark database records so they are not used in the CRA or other Site analyses; and
- Data Quality Assessment (DQA), including comparisons of confirmation data with project data quality objectives (DQOs).

Approval of this Closeout Report constitutes regulatory agency concurrence that IHSS Group NE-1 (Ponds B-1, B-2, and B-3) is an NFAA Site. This information and NFAA determination will be documented in the Fiscal Year (FY) 2005 (05) Annual Update for the Historical Release Report (HRR).

2.0 SITE CHARACTERIZATION

Ponds B-1, B-2, and B-3 are located in the South Walnut Creek drainage, downstream of the 900 Area (Figure 2). The ponds have served as detention ponds for the past several decades. The ponds were designed and constructed to provide residence time and holding capacity for spills and sedimentation of suspended material. The sediment in the ponds became contaminated due to releases from industrial processes.

Preaccelerated action characterization information for IHSS Group NE-1 consists of historical process knowledge and analytical data. Historical information for the IHSS Group was derived from previous studies (DOE 1992-2004) and is briefly summarized in Section 2.1.

Prior to remediation activities and subsequent confirmation sampling, characterization soil samples for radionuclides were collected from areas upstream of Pond B-1 and from the perimeters of Ponds B-1, B-2, and B-3. These samples were collected to determine the lateral extent of radiological contamination present in the area and define initial excavation boundaries. Preaccelerated action and accelerated action results for IHSS Group NE-1 (Ponds B-1, B-2, and B-3) are summarized in Sections 2.2 and 2.3, respectively. The enclosed compact disc (CD) contains the complete accelerated action data set for IHSS Group NE-1. The CD contains standardized real and quality control (QC) data, including Chemical Abstracts Service (CAS) numbers, analyte names, and units.

Accelerated action analytical data were collected in accordance with the IABZSAP (DOE 2004c). Sampling specifications, including potential contaminants of concern (PCOCs), media sampled, and deviations from planned locations, are presented in Table 1. A summary of accelerated action and confirmation sampling and analyses is presented in Table 2.

As part of the site cleanup and closure activities, the sediment in Ponds B-1, B-2, and B-3 was remediated. All sediment in the ponds was excavated and disposed of during the remediation. Contaminated material was placed into waste containers or staged for rail shipment, and shipped for off-site disposal.

2087000 2087200 2087400 2087600 2087800

751000 750800 750600 750400

5900 5855 5870 5885 5900

Pond B-3

Pond B-2

Pond B-1

Figure 2

IHSS Group NE-1 (Ponds B-1, B-2, and B-3) Detailed Location

Key

- Ponds B-1, B-2, and B-3
- Wetland
- Dirt road
- Stream, ditch, or other drainage feature
- Topography (5-ft interval)
- OPWL (removed)

N W E S

40 0 40 80 Feet

Scale = 1:1,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for:

Date: 05-17-05

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Table 1
IHSS Group NE-1 (Ponds B-1, B-2, and B-3)
Accelerated Action Sampling Specifications and Deviations

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Upstream and Pond Perimeter Characterization Sampling Locations									
CU45-000	Upstream of B-1	750421.119	2086924.096	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.0 - 2.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-001	Upstream of B-1	750430.462	2086919.941	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.0 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-002	Upstream of B-1	750383.08	2086900.464	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.0 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-003	Upstream of B-1	750373.39	2086903.351	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.0 - 1.2	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-004	Upstream of B-1	750401.643	2086890.816	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.5 - 2.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-005	Upstream of B-1	750410.782	2086886.797	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.5 - 2.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-006	Upstream of B-1	750374.756	2086852.199	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.0 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-007	Upstream of B-1	750372.944	2086847.85	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.0 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Upstream and Pond Perimeter Characterization Sampling Locations									
CU45-008	Upstream of B-1	750411.505	2086929.315	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.8 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-009	Upstream of B-1	750392.122	2086895.904	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.7 - 0.9	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-010	Upstream of B-1	750375.996	2086855.679	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.8 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CU45-011	Upstream of B-1	750366.804	2086825.492	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 1.3 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides upstream of Pond B-1.
CV45-018	B-1	750480.409	2087109.525	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-019	B-1	750475	2087112.1	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-020	B-1	750424.051	2086966.057	N/A	N/A	Subsurface Soil	0.0 - 1.0 2.5 - 3.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-021	B-1	750416.602	2086970.549	N/A	N/A	Subsurface Soil	0.0 - 2.0 2.0 - 2.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-022	B-1	750440.605	2086953.031	N/A	N/A	Subsurface Soil	0.0 - 1.0	Radionuclides	Biased characterization sample to determine the lateral extent of radionuclides around perimeter of Pond B-1.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Upstream and Pond Perimeter Characterization Sampling Locations									
CV45-023	B-1	750450.199	2086946.042	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-024	Upstream of B-1	750401.471	2086934.263	N/A	N/A	Subsurface Soil	0.0 - 1.0 1.0 - 3.0	Radionuclides	Biased characterization samples to determine lateral extent of radionuclides upstream of Pond B-1.
CV45-025	Upstream of B-1	750391.795	2086938.791	N/A	N/A	Subsurface Soil	0.0 - 1.0 2.5 - 3.0	Radionuclides	Biased characterization samples to determine lateral extent of radionuclides upstream of Pond B-1.
CV45-026	B-1	750510.2	2087095.858	N/A	N/A	Surface Soil	0.0 - 0.2	Radionuclides	Biased characterization sample to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-027	B-1	750496.863	2087101.607	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 1.1 - 1.3	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-028	B-1	750485.941	2087107.399	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.6 - 0.7	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-029	B-1	750471.261	2087037.901	N/A	N/A	Surface Soil	0.0 - 0.2	Radionuclides	Biased characterization sample to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-030	B-1	750462.14	2087042.186	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.8 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-031	B-1	750454.988	2087045.867	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.7 - 0.9	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Upstream and Pond Perimeter Characterization Sampling Locations									
CV45-032	B-1	750431.261	2086960.034	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 1.3 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-033	B-1	750491.622	2086995.534	N/A	N/A	Surface Soil	0.0 - 0.2	Radionuclides	Biased characterization sample to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-034	B-1	750493.747	2086993.848	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.8 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-035	B-1	750496.213	2086990.33	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.8 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-036	B-1	750534.965	2087038.675	N/A	N/A	Surface Soil	0.0 - 0.2	Radionuclides	Biased characterization sample to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-037	B-1	750541.461	2087032.495	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.2 0.8 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-038	B-1	750547.384	2087029.143	N/A	N/A	Surface Soil	0.0 - 0.2 0.3 - 0.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-039	B-1	750539.81	2087128.342	N/A	N/A	Surface Soil	0.0 - 0.3	Radionuclides	Biased characterization sample to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-040	B-1	750540.893	2087129.85	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.3 1.5 - 1.8	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Upstream and Pond Perimeter Characterization Sampling Locations									
CV45-041	B-1	750556.808	2087118.126	N/A	N/A	Surface Soil	0.0 - 0.3	Radionuclides	Biased characterization sample to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CV45-042	B-1	750558.332	2087120.833	N/A	N/A	Subsurface Soil	1.0 - 1.3	Radionuclides	Biased characterization sample to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CW45-002	B-1	750544.722	2087134.287	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CW45-003	B-1	750546.757	2087139.417	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-1.
CW45-004	B-2	750606.503	2087203.314	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.1 1.5 - 2.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CW45-005	B-2	750612.035	2087211.366	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CW46-017	B-2	750636.498	2087198.402	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 2.0 - 2.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CW46-018	B-2	750636.911	2087214.192	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CW46-019	B-2	750664.649	2087323.055	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 2.5 - 3.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Upstream and Pond Perimeter Characterization Sampling Locations									
CW46-020	B-2	750676.218	2087321.87	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 2.0 - 3.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CX45-002	B-2	750608.75	2087325.924	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 1.0 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CX46-023	B-2	750613.009	2087327.922	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CX46-024	B-2	750673.883	2087418.411	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 2.5 - 3.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CX47-000	B-2	750680.149	2087413.446	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CY46-005	B-2	750565.53	2087456.108	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CY46-006	B-2	750571.12	2087454.748	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CY46-007	B-3	750710.87	2087639.725	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.
CY46-008	B-3	750736.701	2087710.251	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Upstream and Pond Perimeter Characterization Sampling Locations									
CY47-003	B-2	750643.455	2087511.731	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CY47-004	B-2	750685.704	2087503.355	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CY47-005	B-2	750687.01	2087511.614	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.1 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CY47-006	B-2	750645.731	2087517.962	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 1.0 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-2.
CY47-007	B-3	750750.457	2087619.936	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.
CY47-008	B-3	750786.298	2087676.273	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.
CY47-009	B-3	750816.758	2087735.442	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.
CZ46-005	B-3	750728.61	2087745.731	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.
CZ46-006	B-3	750730.138	2087810.673	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Upstream and Pond Perimeter Characterization Sampling Locations									
CZ47-014	B-3	750830.315	2087846.11	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.
CZ47-015	B-3	750779.137	2087859.049	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 0.5 - 1.0	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.
CZ47-016	B-3	750837.001	2087784.626	N/A	N/A	Surface and Subsurface Soil	0.0 - 0.5 1.0 - 1.5	Radionuclides	Biased characterization samples to determine the lateral extent of radionuclides around perimeter of Pond B-3.
Confirmation and In-Process Sampling Locations									
CU45-014	B-1	750460.025	2086920.509	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CU45-015	B-1	750441.959	2086891.004	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CU45-016	B-1	750450.998	2086942.792	N/A	N/A	Subsurface Soil	2.1 - 2.6	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CU45-017	B-1	750430.652	2086955.99	N/A	N/A	Subsurface Soil	10.2 - 10.7	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CU45-018	B-1	750375.549	2086911.271	N/A	N/A	Surface Soil	0.0 - 0.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-000	B-1	750467.327	2087055.688	750467.31	2087055.689	Subsurface Soil	1.1 - 1.6	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-001	B-1	750455.254	2087021.669	750455.2	2087021.787	Subsurface Soil	2.4 - 2.9	Radionuclides	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CV45-002	B-1	750443.064	2086987.953	750443.09	2086987.885	Subsurface Soil	7.4 - 7.9	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-003	B-1	750526.965	2087129.965	750526.945	2087129.956	Subsurface Soil	5.5 - 6.0	Radionuclides	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-004	B-1	750514.846	2087096.101	750514.835	2087096.054	Subsurface Soil	8.9 - 9.4	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-005	B-1	750502.704	2087062.131	750502.725	2087062.152	Subsurface Soil	8.9 - 9.4	Radionuclides	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-006	B-1	750490.609	2087028.249	750490.615	2087028.25	Subsurface Soil	10.2 - 10.7	Radionuclides	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-007	B-1	750478.474	2086994.383	750478.505	2086994.348	Subsurface Soil	8.9 - 9.4	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-008	B-1	750550.286	2087102.522	750550.25	2087102.518	Subsurface Soil	14.6 - 15.1	Radionuclides	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-009	B-1	750538.151	2087068.635	750538.14	2087068.616	Subsurface Soil	13.4 - 13.9	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.
CV45-010	B-1	750526.031	2087034.722	750526.03	2087034.714	Subsurface Soil	5.4 - 5.9	Radionuclides	Statistical confirmation soil sample collected from Pond B-1. No significant change in location.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CV45-011	B-1	750396.17	2086853.802	N/A	N/A	Subsurface Soil	4.0 - 4.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV45-012	B-1	750377.998	2086825.646	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV45-013	B-1	750407.892	2086831.831	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV45-014	B-1	750553.869	2087121.509	N/A	N/A	Subsurface Soil	7.3 - 7.8	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV45-015	B-1	750359.175	2086842.93	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV45-016	B-1	750365.95	2086864.903	N/A	N/A	Subsurface Soil	4.7 - 5.2	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV45-017	B-1	750388.003	2086889.576	N/A	N/A	Subsurface Soil	5.1 - 5.6	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV45-044A	B-1	750495.006	2086961.481	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased in-process sample on northwestern perimeter of Pond B-1.
CV45-044B	B-1	750495.006	2086961.481	N/A	N/A	Subsurface Soil	1.7 - 2.2	Radionuclides	Biased confirmation sample of CV45-044A over-excavation on northwestern perimeter of Pond B-1.
CV45-045	B-1	750463.906	2086962.778	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-046	B-1	750504.669	2087001.213	N/A	N/A	Subsurface Soil	5.8 - 6.3	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-047	B-1	750490.21	2087103.334	N/A	N/A	Subsurface Soil	1.5 - 2.0	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CV45-048	B-1	750481.216	2087079.151	N/A	N/A	Subsurface Soil	5.7 - 6.2	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-049	B-1	750455.246	2087044.312	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-050	B-1	750434.291	2087006.871	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-051	B-1	750409.081	2086927.654	N/A	N/A	Subsurface Soil	8.2 - 8.7	Metals, PCBs, Radionuclides, SVOCs, VOCs	Biased confirmation sample for additional coverage in Pond B-1.
CV45-052	B-1	750576.292	2087034.419	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-053	B-1	750382.365	2086944.971	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-054	B-1	750403.399	2086976.729	N/A	N/A	Subsurface Soil	1.5 - 2.0	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-055	B-1	750434.64	2086919.85	N/A	N/A	Subsurface Soil	1.6 - 2.1	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV45-056A	B-1	750569.183	2087115.822	N/A	N/A	Subsurface Soil	18.9 - 19.4	Radionuclides	Biased in-process sample on eastern perimeter of Pond B-1.
CV45-056B	B-1	750569.183	2087115.822	N/A	N/A	Subsurface Soil	19.4 - 19.9	Radionuclides	Biased confirmation sample of CV45-044A over-excavation on eastern perimeter of Pond B-1.
CV45-057	B-1	750519.622	2086983.073	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV46-002	B-1	750573.585	2087075.047	750573.555	2087075.079	Subsurface Soil	8.3 - 8.8	Metals, PCBs, Radionuclides, SVOCs, VOCs	Biased confirmation sample to target perimeter of Pond B-1.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CV46-003	B-1	750425.889	2086861.081	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV46-004A	B-1	750583.315	2087103.753	N/A	N/A	Subsurface Soil	5.9 - 6.4	Radionuclides	Biased in-process sample on eastern perimeter of Pond B-1.
CV46-004B	B-1	750583.315	2087103.753	N/A	N/A	Subsurface Soil	9.6 - 10.1	Radionuclides	Biased confirmation sample of CV46-004A over-excavation on eastern perimeter of Pond B-1.
CV46-005	B-1	750416.71	2086887.834	N/A	N/A	Subsurface Soil	1.4 - 1.9	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CV46-008	B-1	750546.181	2087029.621	N/A	N/A	Subsurface Soil	5.0 - 5.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV46-009	B-1	750601.528	2087062.358	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV46-010	B-1	750572.994	2087049.9	N/A	N/A	Subsurface Soil	3.6 - 4.1	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV46-011	B-1	750569.183	2087123.861	N/A	N/A	Subsurface Soil	3.9 - 4.4	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV46-012	B-1	750597.904	2087105.556	N/A	N/A	Subsurface Soil	1.3 - 1.8	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV46-013	B-1	750547.666	2087010.763	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV46-014	B-1	750589.399	2087076.353	N/A	N/A	Subsurface Soil	1.2 - 1.7	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CV46-015	B-1	750619.409	2087081.679	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CW45-000	B-1	750534.367	2087140.064	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CW45-001	B-1	750549.992	2087129.711	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-1.
CW45-006	B-1	750506.788	2087133.399	N/A	N/A	Subsurface Soil	4.4 - 4.9	Radionuclides	Biased confirmation sample for additional coverage in Pond B-1.
CW46-002	B-2	750622.962	2087305.894	750622.909	2087305.93	Subsurface Soil	8.2 - 8.7	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CW46-003	B-2	750658.306	2087312.363	750658.324	2087312.393	Subsurface Soil	8.6 - 9.1	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CW46-004	B-2	750646.216	2087278.513	750646.214	2087278.491	Subsurface Soil	10.3 - 10.8	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CW46-005	B-2	750634.147	2087244.588	750634.105	2087244.589	Subsurface Soil	10.7 - 11.2	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CW46-006	B-2	750622.005	2087210.684	750621.995	2087210.687	Subsurface Soil	4.3 - 4.8	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CW46-007	B-2	750669.488	2087251.033	750669.52	2087251.053	Subsurface Soil	6.5 - 7.0	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CW46-008	B-2	750657.424	2087217.18	750657.41	2087217.151	Subsurface Soil	7.0 - 7.5	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CW46-009	B-2	750604.56	2087230.049	N/A	N/A	Subsurface Soil	2.4 - 2.9	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2. Sample location moved southeast to obtain verification that contamination did not extend laterally beyond the mapped pond shore/waterline.
CW46-010	B-2	750653.12	2087189.268	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CW46-011	B-2	750757.359	2087484.989	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CW46-012	B-2	750744.659	2087492.406	N/A	N/A	Subsurface Soil	0.2 - 0.7	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CW46-013	B-2	750703.141	2087152.65	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2. Sample location moved north to verify haul/loading road surface was not contaminated during excavation operations.
CW46-014	B-2	750735.7	2087451.97	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CW46-015	B-2	750599.921	2087303.045	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CW46-016	B-2	750612.46	2087263.262	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CW46-022	B-2	750676.062	2087223.512	N/A	N/A	Subsurface Soil	6.5 - 7.0	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CW46-023	B-2	750684.052	2087196.775	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CW46-024	B-2	750713.268	2087208.455	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CW46-025	B-2	750706.938	2087245.919	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CW46-026A	B-2	750694.721	2087276.247	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased in-process sample for additional coverage in Pond B-2
CW46-026B	B-2	750694.721	2087276.247	N/A	N/A	Subsurface Soil	2.4 - 2.9	Radionuclides	Biased confirmation sample of CW46-026A over-excavation on northern perimeter of Pond B-2.
CW46-027	B-2	750635.879	2087250.778	N/A	N/A	Subsurface Soil	10.5 - 11.0	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CW46-028	B-2	750636.828	2087279.727	N/A	N/A	Subsurface Soil	11.9 - 12.4	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CW46-029	B-2	750640.232	2087314.369	N/A	N/A	Subsurface Soil	11.9 - 12.4	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CX45-000	B-2	750557.697	2087432.148	N/A	N/A	Subsurface Soil	2.2 - 2.7	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CX45-001	B-2	750586.317	2087338.823	N/A	N/A	Subsurface Soil	1.2 - 1.7	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CX46-000	B-2	750589.357	2087489.933	750589.324	2087489.952	Subsurface Soil	5.1 - 5.6	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CX46-001	B-2	750577.184	2087456.054	750577.214	2087456.05	Subsurface Soil	5.1 - 5.6	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-002	B-2	750624.709	2087496.406	750624.739	2087496.415	Subsurface Soil	9.2 - 9.7	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-003	B-2	750612.611	2087462.546	750612.629	2087462.513	Subsurface Soil	13.8 - 14.3	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-004	B-2	750602.417	2087424.018	750600.519	2087428.611	Subsurface Soil	14.8 - 15.3	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-005	B-2	750588.408	2087394.733	750588.409	2087394.709	Subsurface Soil	11.5 - 12.0	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-006	B-2	750660.194	2087502.881	750660.154	2087502.879	Subsurface Soil	12.0 - 12.5	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-007	B-2	750648.023	2087468.948	750648.044	2087468.977	Subsurface Soil	17.5 - 18.0	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-008	B-2	750635.927	2087435.084	750635.934	2087435.075	Subsurface Soil	18.3 - 18.8	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-009	B-2	750623.805	2087401.198	750623.824	2087401.173	Subsurface Soil	14.7 - 15.2	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CX46-010	B-2	750611.717	2087367.242	750611.714	2087367.27	Subsurface Soil	15.6 - 16.1	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-011	B-2	750683.484	2087475.457	750683.459	2087475.44	Subsurface Soil	16.8 - 17.3	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-012	B-2	750671.351	2087441.546	750671.349	2087441.538	Subsurface Soil	15.0 - 15.5	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-013	B-2	750659.286	2087407.643	750659.239	2087407.636	Subsurface Soil	13.0 - 13.5	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-014	B-2	750647.138	2087373.704	750647.129	2087373.734	Subsurface Soil	12.8 - 13.3	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-015	B-2	750635.051	2087339.798	750635.019	2087339.832	Subsurface Soil	12.3 - 12.8	Radionuclides	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-016	B-2	750670.434	2087346.337	750670.434	2087346.295	Subsurface Soil	6.7 - 7.2	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-2. No significant change in location.
CX46-017	B-2	750700.203	2087401.261	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CX46-018	B-2	750705.58	2087438.815	N/A	N/A	Subsurface Soil	1.6 - 2.1	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CX46-019	B-2	750714.012	2087475.954	N/A	N/A	Subsurface Soil	9.8 - 10.3	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CX46-020	B-2	750563.125	2087382.376	N/A	N/A	Subsurface Soil	18.5 - 19.0	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CX46-021	B-2	750628.033	2087518.859	N/A	N/A	Subsurface Soil	1.6 - 2.1	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CX46-022	B-2	750602.497	2087516.258	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-2.
CX46-027	B-2	750719.486	2087294.763	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CX46-028	B-2	750690.935	2087317.717	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CX46-029	B-2	750708.616	2087360.539	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CX46-030	B-2	750684.53	2087515.957	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CX46-031	B-2	750706.145	2087512.776	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-2.
CY46-000	B-3	750756.138	2087678.875	750756.119	2087678.852	Subsurface Soil	11.0 - 11.5	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CY46-001	B-3	750730.429	2087631.881	N/A	N/A	Subsurface Soil	6.0 - 6.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CY46-002	B-3	750734.29	2087710.96	N/A	N/A	Subsurface Soil	0.7 - 1.2	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CY46-003	B-3	750721.298	2087676.18	N/A	N/A	Subsurface Soil	2.5 - 3.0	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CY46-004	B-3	750711.293	2087647.712	N/A	N/A	Subsurface Soil	1.1 - 1.6	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CY46-009	B-3	750829.756	2087718.664	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-3
CY47-000	B-3	750768.247	2087712.713	750768.229	2087712.754	Subsurface Soil	11.5 - 12.0	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CY47-001	B-3	750803.579	2087719.215	750803.644	2087719.218	Subsurface Soil	8.2 - 8.7	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CY47-002	B-3	750768.895	2087632.216	N/A	N/A	Subsurface Soil	3.1 - 3.6	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CY47-013	B-3	750822.73	2087676.558	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-3
CY47-015	B-3	750820.504	2087641.743	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-3
CZ46-000	B-3	750745.875	2087835.452	750745.839	2087835.436	Subsurface Soil	2.4 - 2.9	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ46-001	B-3	750733.745	2087801.588	750733.729	2087801.534	Subsurface Soil	3.4 - 3.9	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CZ46-002	B-3	750757.042	2087774.081	750757.034	2087774.095	Subsurface Soil	11.7 - 12.2	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ46-003	B-3	750823.861	2087840.899	N/A	N/A	Subsurface Soil	8.2 - 8.7	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CZ46-004	B-3	750724.474	2087760.439	N/A	N/A	Subsurface Soil	0.9 - 1.4	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CZ47-000	B-3	750781.261	2087841.902	750781.254	2087841.899	Subsurface Soil	9.4 - 9.9	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ47-001	B-3	750769.107	2087808.046	750769.144	2087807.997	Subsurface Soil	12.6 - 13.1	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ47-002	B-3	750804.589	2087814.504	750804.559	2087814.461	Subsurface Soil	14.6 - 15.1	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ47-003	B-3	750792.479	2087780.535	750792.449	2087780.558	Subsurface Soil	13.2 - 13.7	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ47-004	B-3	750780.378	2087746.696	750780.339	2087746.656	Subsurface Soil	11.7 - 12.2	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ47-005	B-3	750839.963	2087820.884	750839.974	2087820.924	Subsurface Soil	10.7 - 11.2	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.

Location	Pond	Actual Northing	Actual Easting	Planned Northing	Planned Easting	Media	Depth Interval (ft)	Analytes	Comments/Deviations
Confirmation and In-Process Sampling Locations									
CZ47-006	B-3	750827.9	2087787.021	750827.864	2087787.022	Subsurface Soil	7.8 - 8.3	Radionuclides	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ47-007	B-3	750815.798	2087753.157	750815.754	2087753.12	Subsurface Soil	6.0 - 6.5	Metals, PCBs, Radionuclides, SVOCs, VOCs	Statistical confirmation soil sample collected from Pond B-3. No significant change in location.
CZ47-008	B-3	750791.105	2087683.773	N/A	N/A	Subsurface Soil	6.5 - 7.0	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CZ47-009	B-3	750791.738	2087649.371	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CZ47-010	B-3	750743.323	2087738.911	N/A	N/A	Subsurface Soil	5.3 - 5.8	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CZ47-011	B-3	750845.672	2087763.463	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CZ47-012	B-3	750860.414	2087802.911	N/A	N/A	Subsurface Soil	0.2 - 0.7	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CZ47-013	B-3	750853.308	2087832.498	N/A	N/A	Subsurface Soil	3.1 - 3.6	Radionuclides	Biased confirmation sample to target perimeter of Pond B-3.
CZ47-020	B-3	750831.408	2087609.167	N/A	N/A	Subsurface Soil	1.0 - 1.5	Radionuclides	Biased confirmation sample for additional coverage in Pond B-3.

Table 2
IHSS Group NE-1 (Ponds B-1, B-2, and B-3)
Accelerated Action Characterization and
Confirmation/In-Process Soil Sampling and Analysis Summary

Category	Planned Total	Actual Total
Upstream and Pond Perimeter Characterization Sampling		
Number of Sampling Locations	N/A	65
Number of Samples	N/A	122
Number of Radionuclide Analyses	N/A	122
Confirmation/In-Process Sampling		
Number of Sampling Locations	91	140
Number of Samples	91	140
Number of Radionuclide Analyses	91	140
Number of VOC Analyses	10	15
Number of SVOC Analyses	10	15
Number of PCB Analyses	10	15
Number of Metal Analyses	10	15

2.1 Historical Information

Historical analytical data indicated radioactive contamination of sediments within and upstream of the B-ponds. The general types of materials that were routinely released to the B-series drainage during the history of RFETS include the following: treated sanitary effluent, treated and untreated process waste, treated and untreated decontamination laundry wastewater, cooling tower blowdown, footing drain flows, and stormwater runoff. The "Pond B-1 Dam Hot Spot" is located on the eastern side of the dam near the Original Process Waste Line (OPWL) discharge point (Figure 2). The OPWL has been removed from this area. Groundwater in the area contains volatile organic compound (VOC) contamination from the East Trenches area.

2.2 Preaccelerated Action Data

Sediment and soil samples collected from Ponds B-1, B-2, and B-3 and nearby areas indicated the presence of americium-241 and plutonium-239/240 at activities greater than the RFCA wildlife refuge worker (WRW) action levels (ALs) (Figure 3). None of the remaining PCOCs (metals, polychlorinated biphenyls [PCBs], semivolatile organic compounds [SVOCs], and VOCs) were detected in sediments or soil at levels above the WRW ALs. Existing preaccelerated action data and information for IHSS Group NE-1 are available in the HRRs (DOE 1992-2004), ER RSOP Notification #04-11 (DOE 2004a), and Appendix C of the IABZSAP (DOE 2004c).

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2.3 Accelerated Action Data

A total of 65 accelerated action soil characterization sampling locations were sampled in IHSS Group NE-1 (Ponds B-1, B-2, and B-3). These characterization samples were analyzed for radionuclides to determine the areal extent of contamination in the area upstream of Pond B-1 and around the perimeters of Ponds B-1, B-2, and B-3. Fifty soil characterization samples from 30 locations contained one or more radionuclides at activities greater than RFCA WRW ALs (Figure 4).

Following excavation of the sediment in Ponds B-1, B-2, and B-3, in-process and confirmation samples (statistical and biased) were collected. As described in the December 29, 2004 contact record to the agencies (Appendix A), biased confirmation sampling locations were determined by the Field Project Manager and were collected in areas not covered by statistical sampling grid locations. Proposed statistical and biased confirmation sample locations were shown on a map attachment with the December 29, 2004 contact record to the agencies and in ER RSOP Notification #04-11 (DOE 2004a). Although no significant changes in statistical sampling locations occurred, many of the biased sampling locations were adjusted by the Field Project Manager to target specific areas based on field conditions.

All samples were analyzed for radionuclides, and approximately 11 percent of the samples were analyzed for metals, PCBs, SVOCs, and VOCs. Analytical results for all accelerated action characterization, in-process, and confirmation samples are presented in Table 3. In addition, analytical results with activities or concentrations greater than RFCA WRW ALs are identified with bold text in Table 3.

A total of 3 in-process and 52 confirmation samples were collected in Pond B-1 and the drainage area upstream of Pond B-1. Three locations (in-process samples CV45-044A, CV45-056A, and CV46-004A) contained radionuclides at activities greater than RFCA WRW ALs. These areas were overexcavated and the results from confirmation samples (CV45-044B, CV45-056B, and CV46-004B) indicated no exceedances of RFCA WRW ALs. Results of in-process samples collected from Ponds B-1 and B-2 are shown on Figure 5. Results of confirmation samples collected in Pond B-1 are presented on Figure 6.

One in-process sample and 53 confirmation samples were collected in Pond B-2. In-process sample CW46-026A contained plutonium-239/240 at an activity greater than the RFCA WRW AL, as shown on Figure 5. The area was overexcavated and the results from confirmation sample CW46-026B indicated no exceedances of RFCA WRW ALs. Results of confirmation samples are presented on Figure 7.

A total of 31 confirmation samples were collected in Pond B-3. No exceedances of RFCA WRW ALs were reported in any of the confirmation samples collected from Pond B-3, as shown on Figure 8.

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Table 3
IHSS Group NE-1 (Ponds B-1, B-2, and B-3) Accelerated Action Characterization, In-Process, and Confirmation Sampling Results Greater Than Background Means Plus Two Standard Deviations or RLs

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CU45-000	750421.119	2086924.096	0.0	1.0	Americium-241	67.200	76	0.020	-	pCi/g
CU45-000	**750421.119**	**2086924.096**	**0.0**	**1.0**	**Plutonium-239/240**	**148.000**	**50**	**0.020**	**-**	**pCi/g**
CU45-000	750421.119	2086924.096	0.0	1.0	Uranium-234	10.200	300	2.640	-	pCi/g
CU45-000	750421.119	2086924.096	0.0	1.0	Uranium-235	0.503	8	0.120	-	pCi/g
CU45-000	750421.119	2086924.096	0.0	1.0	Uranium-238	9.670	351	1.490	-	pCi/g
CU45-000	750421.119	2086924.096	1.0	2.0	Americium-241	43.100	76	0.020	-	pCi/g
CU45-000	**750421.119**	**2086924.096**	**1.0**	**2.0**	**Plutonium-239/240**	**69.400**	**50**	**0.020**	**-**	**pCi/g**
CU45-000	750421.119	2086924.096	1.0	2.0	Uranium-234	8.550	300	2.640	-	pCi/g
CU45-000	750421.119	2086924.096	1.0	2.0	Uranium-235	0.410	8	0.120	-	pCi/g
CU45-000	750421.119	2086924.096	1.0	2.0	Uranium-238	7.640	351	1.490	-	pCi/g
CU45-001	750430.462	2086919.941	0.0	1.0	Americium-241	2.615	76	0.020	-	pCi/g
CU45-001	*750430.462*	*2086919.941*	*0.0*	*1.0*	*Plutonium-239/240*	*14.906*	*50*	*0.020*	-	*pCi/g*
CU45-001	*750430.462*	*2086919.941*	*0.0*	*1.0*	*Uranium-234*	*2.665*	*300*	*2.640*	-	*pCi/g*
CU45-001	750430.462	2086919.941	0.0	1.0	Uranium-238	2.665	351	1.490	-	pCi/g
CU45-001	750430.462	2086919.941	1.0	1.5	Americium-241	3.668	76	0.020	-	pCi/g
CU45-001	*750430.462*	*2086919.941*	*1.0*	*1.5*	*Plutonium-239/240*	*20.908*	*50*	*0.020*	-	*pCi/g*
CU45-001	750430.462	2086919.941	1.0	1.5	Uranium-235	0.171	8	0.120	-	pCi/g
CU45-001	750430.462	2086919.941	1.0	1.5	Uranium-238	1.828	351	1.490	-	pCi/g
CU45-002	750383.08	2086900.464	0.0	1.0	Americium-241	4.730	76	0.020	-	pCi/g
CU45-002	*750383.08*	*2086900.464*	*0.0*	*1.0*	*Plutonium-239/240*	*26.961*	*50*	*0.020*	-	*pCi/g*
CU45-002	*750383.08*	*2086900.464*	*0.0*	*1.0*	*Uranium-234*	*5.533*	*300*	*2.640*	-	*pCi/g*
CU45-002	750383.08	2086900.464	0.0	1.0	Uranium-235	0.308	8	0.120	-	pCi/g
CU45-002	750383.08	2086900.464	0.0	1.0	Uranium-238	5.533	351	1.490	-	pCi/g
CU45-002	750383.08	2086900.464	1.0	1.5	Americium-241	60.930	76	0.020	-	pCi/g
CU45-002	***750383.08***	***2086900.464***	***1.0***	***1.5***	***Plutonium-239/240***	***347.301***	***50***	***0.020***	***-***	***pCi/g***
CU45-002	*750383.08*	*2086900.464*	*1.0*	*1.5*	*Uranium-234*	*5.510*	*300*	*2.640*	-	*pCi/g*
CU45-002	750383.08	2086900.464	1.0	1.5	Uranium-235	0.325	8	0.120	-	pCi/g
CU45-002	750383.08	2086900.464	1.0	1.5	Uranium-238	5.510	351	1.490	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CU45-003	750373.39	2086903.351	0.0	1.0	Americium-241	2.351	76	0.020	-	pCi/g
CU45-003	*750373.39*	*2086903.351*	*0.0*	*1.0*	*Plutonium-239/240*	*13.401*	*50*	*0.020*	-	*pCi/g*
CU45-003	*750373.39*	*2086903.351*	*0.0*	*1.0*	*Uranium-234*	*5.958*	*300*	*2.640*	-	*pCi/g*
CU45-003	750373.39	2086903.351	0.0	1.0	Uranium-238	5.958	351	1.490	-	pCi/g
CU45-003	*750373.39*	*2086903.351*	*1.0*	*1.2*	*Uranium-234*	*4.634*	*300*	*2.640*	-	*pCi/g*
CU45-003	750373.39	2086903.351	1.0	1.2	Uranium-235	0.344	8	0.120	-	pCi/g
CU45-003	750373.39	2086903.351	1.0	1.2	Uranium-238	4.634	351	1.490	-	pCi/g
CU45-004	750401.643	2086890.816	0.0	1.0	Americium-241	69.820	76	0.020	-	pCi/g
CU45-004	***750401.643***	***2086890.816***	***0.0***	***1.0***	***Plutonium-239/240***	***397.974***	***50***	***0.020***	-	***pCi/g***
CU45-004	*750401.643*	*2086890.816*	*0.0*	*1.0*	*Uranium-234*	*14.920*	*300*	*2.640*	-	*pCi/g*
CU45-004	750401.643	2086890.816	0.0	1.0	Uranium-235	0.553	8	0.120	-	pCi/g
CU45-004	750401.643	2086890.816	0.0	1.0	Uranium-238	14.920	351	1.490	-	pCi/g
CU45-004	**750401.643**	**2086890.816**	**1.5**	**2.0**	**Americium-241**	**76.920**	**76**	**0.020**	-	**pCi/g**
CU45-004	***750401.643***	***2086890.816***	***1.5***	***2.0***	***Plutonium-239/240***	***438.444***	***50***	***0.020***	-	***pCi/g***
CU45-004	*750401.643*	*2086890.816*	*1.5*	*2.0*	*Uranium-234*	*10.930*	*300*	*2.640*	-	*pCi/g*
CU45-004	750401.643	2086890.816	1.5	2.0	Uranium-235	0.530	8	0.120	-	pCi/g
CU45-004	750401.643	2086890.816	1.5	2.0	Uranium-238	10.930	351	1.490	-	pCi/g
CU45-005	**750410.782**	**2086886.797**	**0.0**	**1.0**	**Americium-241**	**85.900**	**76**	**0.020**	-	**pCi/g**
CU45-005	***750410.782***	***2086886.797***	***0.0***	***1.0***	***Plutonium-239/240***	***489.630***	***50***	***0.020***	-	***pCi/g***
CU45-005	*750410.782*	*2086886.797*	*0.0*	*1.0*	*Uranium-234*	*8.158*	*300*	*2.640*	-	*pCi/g*
CU45-005	750410.782	2086886.797	0.0	1.0	Uranium-235	0.485	8	0.120	-	pCi/g
CU45-005	750410.782	2086886.797	0.0	1.0	Uranium-238	8.158	351	1.490	-	pCi/g
CU45-005	**750410.782**	**2086886.797**	**1.5**	**2.0**	**Americium-241**	**105.700**	**76**	**0.020**	-	**pCi/g**
CU45-005	***750410.782***	***2086886.797***	***1.5***	***2.0***	***Plutonium-239/240***	***602.490***	***50***	***0.020***	-	***pCi/g***
CU45-005	*750410.782*	*2086886.797*	*1.5*	*2.0*	*Uranium-234*	*10.060*	*300*	*2.640*	-	*pCi/g*
CU45-005	750410.782	2086886.797	1.5	2.0	Uranium-235	0.509	8	0.120	-	pCi/g
CU45-005	750410.782	2086886.797	1.5	2.0	Uranium-238	10.060	351	1.490	-	pCi/g
CU45-006	750374.756	2086852.199	0.0	1.0	Americium-241	10.310	76	0.020	-	pCi/g
CU45-006	***750374.756***	***2086852.199***	***0.0***	***1.0***	***Plutonium-239/240***	***58.767***	***50***	***0.020***	-	***pCi/g***
CU45-006	750374.756	2086852.199	0.0	1.0	Uranium-235	0.179	8	0.120	-	pCi/g
CU45-006	750374.756	2086852.199	0.0	1.0	Uranium-238	2.362	351	1.490	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CU45-006	750374.756	2086852.199	1.0	1.5	Americium-241	29.920	76	0.020	-	pCi/g
CU45-006	***750374.756***	***2086852.199***	***1.0***	***1.5***	***Plutonium-239/240***	***170.544***	***50***	***0.020***	-	***pCi/g***
CU45-006	750374.756	2086852.199	1.0	1.5	Uranium-235	0.219	8	0.120	-	pCi/g
CU45-006	750374.756	2086852.199	1.0	1.5	Uranium-238	2.154	351	1.490	-	pCi/g
CU45-007	750372.944	2086847.85	0.0	1.0	Americium-241	1.690	76	0.020	-	pCi/g
CU45-007	750372.944	2086847.85	0.0	1.0	Plutonium-239/240	3.500	50	0.020	-	pCi/g
CU45-007	750372.944	2086847.85	1.0	1.5	Americium-241	20.800	76	0.020	-	pCi/g
CU45-007	**750372.944**	**2086847.85**	**1.0**	**1.5**	**Plutonium-239/240**	**76.500**	**50**	**0.020**	-	**pCi/g**
CU45-008	750411.505	2086929.315	0.0	0.2	Americium-241	11.570	76	0.023	-	pCi/g
CU45-008	***750411.505***	***2086929.315***	***0.0***	***0.2***	***Plutonium-239/240***	***65.949***	***50***	***0.066***	-	***pCi/g***
CU45-008	*750411.505*	*2086929.315*	*0.0*	*0.2*	*Uranium-234*	*10.290*	*300*	*2.253*	-	*pCi/g*
CU45-008	750411.505	2086929.315	0.0	0.2	Uranium-235	0.334	8	0.094	-	pCi/g
CU45-008	750411.505	2086929.315	0.0	0.2	Uranium-238	10.290	351	2.000	-	pCi/g
CU45-008	**750411.505**	**2086929.315**	**0.8**	**1.0**	**Americium-241**	**115.800**	**76**	**0.020**	-	**pCi/g**
CU45-008	***750411.505***	***2086929.315***	***0.8***	***1.0***	***Plutonium-239/240***	***660.060***	***50***	***0.020***	-	***pCi/g***
CU45-008	*750411.505*	*2086929.315*	*0.8*	*1.0*	*Uranium-234*	*7.926*	*300*	*2.640*	-	*pCi/g*
CU45-008	750411.505	2086929.315	0.8	1.0	Uranium-235	0.354	8	0.120	-	pCi/g
CU45-008	750411.505	2086929.315	0.8	1.0	Uranium-238	7.926	351	1.490	-	pCi/g
CU45-009	750392.122	2086895.904	0.0	0.2	Americium-241	10.070	76	0.023	-	pCi/g
CU45-009	***750392.122***	***2086895.904***	***0.0***	***0.2***	***Plutonium-239/240***	***57.399***	***50***	***0.066***	-	***pCi/g***
CU45-009	*750392.122*	*2086895.904*	*0.0*	*0.2*	*Uranium-234*	*7.346*	*300*	*2.253*	-	*pCi/g*
CU45-009	750392.122	2086895.904	0.0	0.2	Uranium-235	0.276	8	0.094	-	pCi/g
CU45-009	750392.122	2086895.904	0.0	0.2	Uranium-238	7.346	351	2.000	-	pCi/g
CU45-009	750392.122	2086895.904	0.7	0.9	Americium-241	36.930	76	0.020	-	pCi/g
CU45-009	***750392.122***	***2086895.904***	***0.7***	***0.9***	***Plutonium-239/240***	***210.501***	***50***	***0.020***	-	***pCi/g***
CU45-009	*750392.122*	*2086895.904*	*0.7*	*0.9*	*Uranium-234*	*4.038*	*300*	*2.640*	-	*pCi/g*
CU45-009	750392.122	2086895.904	0.7	0.9	Uranium-235	0.258	8	0.120	-	pCi/g
CU45-009	750392.122	2086895.904	0.7	0.9	Uranium-238	4.038	351	1.490	-	pCi/g
CU45-010	750375.996	2086855.679	0.0	0.2	Americium-241	3.675	76	0.023	-	pCi/g
CU45-010	*750375.996*	*2086855.679*	*0.0*	*0.2*	*Plutonium-239/240*	*20.948*	*50*	*0.066*	-	*pCi/g*
CU45-010	*750375.996*	*2086855.679*	*0.0*	*0.2*	*Uranium-234*	*4.449*	*300*	*2.253*	-	*pCi/g*

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CU45-010	750375.996	2086855.679	0.0	0.2	Uranium-235	0.307	8	0.094	-	pCi/g
CU45-010	750375.996	2086855.679	0.0	0.2	Uranium-238	4.449	351	2.000	-	pCi/g
CU45-010	750375.996	2086855.679	0.8	1.0	Americium-241	12.970	76	0.020	-	pCi/g
CU45-010	***750375.996***	***2086855.679***	***0.8***	***1.0***	***Plutonium-239/240***	***73.929***	***50***	***0.020***	-	***pCi/g***
CU45-010	*750375.996*	*2086855.679*	*0.8*	*1.0*	*Uranium-234*	*6.318*	*300*	*2.640*	-	*pCi/g*
CU45-010	750375.996	2086855.679	0.8	1.0	Uranium-235	0.319	8	0.120	-	pCi/g
CU45-010	750375.996	2086855.679	0.8	1.0	Uranium-238	6.318	351	1.490	-	pCi/g
CU45-011	750366.804	2086825.492	0.0	0.2	Americium-241	1.244	76	0.023	-	pCi/g
CU45-011	*750366.804*	*2086825.492*	*0.0*	*0.2*	*Plutonium-239/240*	*7.091*	*50*	*0.066*	-	*pCi/g*
CU45-011	750366.804	2086825.492	1.3	1.5	Americium-241	0.561	76	0.020	-	pCi/g
CU45-011	*750366.804*	*2086825.492*	*1.3*	*1.5*	*Plutonium-239/240*	*3.197*	*50*	*0.020*	-	*pCi/g*
CU45-011	750366.804	2086825.492	1.3	1.5	Uranium-235	0.121	8	0.120	-	pCi/g
CU45-011	750366.804	2086825.492	1.3	1.5	Uranium-238	1.710	351	1.490	-	pCi/g
CV45-018	750480.409	2087109.525	0.0	0.5	Americium-241	5.970	76	0.023	-	pCi/g
CV45-018	*750480.409*	*2087109.525*	*0.0*	*0.5*	*Plutonium-239/240*	*34.029*	*50*	*0.066*	-	*pCi/g*
CV45-018	750480.409	2087109.525	0.5	1.0	Americium-241	0.485	76	0.020	-	pCi/g
CV45-018	*750480.409*	*2087109.525*	*0.5*	*1.0*	*Plutonium-239/240*	*2.764*	*50*	*0.020*	-	*pCi/g*
CV45-018	750480.409	2087109.525	0.5	1.0	Uranium-235	0.142	8	0.120	-	pCi/g
CV45-019	750475	2087112.1	0.0	0.5	Americium-241	1.041	76	0.023	-	pCi/g
CV45-019	*750475*	*2087112.1*	*0.0*	*0.5*	*Plutonium-239/240*	*5.934*	*50*	*0.066*	-	*pCi/g*
CV45-019	750475	2087112.1	0.5	1.0	Americium-241	0.263	76	0.020	-	pCi/g
CV45-019	*750475*	*2087112.1*	*0.5*	*1.0*	*Plutonium-239/240*	*1.497*	*50*	*0.020*	-	*pCi/g*
CV45-019	750475	2087112.1	0.5	1.0	Uranium-235	0.180	8	0.120	-	pCi/g
CV45-020	750424.051	2086966.057	0.0	1.0	Americium-241	14.010	76	0.020	-	pCi/g
CV45-020	***750424.051***	***2086966.057***	***0.0***	***1.0***	***Plutonium-239/240***	***79.857***	***50***	***0.020***	-	***pCi/g***
CV45-020	*750424.051*	*2086966.057*	*0.0*	*1.0*	*Uranium-234*	*4.951*	*300*	*2.640*	-	*pCi/g*
CV45-020	750424.051	2086966.057	0.0	1.0	Uranium-235	0.429	8	0.120	-	pCi/g
CV45-020	750424.051	2086966.057	0.0	1.0	Uranium-238	4.951	351	1.490	-	pCi/g
CV45-020	750424.051	2086966.057	2.5	3.0	Americium-241	9.939	76	0.020	-	pCi/g
CV45-020	***750424.051***	***2086966.057***	***2.5***	***3.0***	***Plutonium-239/240***	***56.652***	***50***	***0.020***	-	***pCi/g***
CV45-020	*750424.051*	*2086966.057*	*2.5*	*3.0*	*Uranium-234*	*3.545*	*300*	*2.640*	-	*pCi/g*

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-020	750424.051	2086966.057	2.5	3.0	Uranium-235	0.129	8	0.120	-	pCi/g
CV45-020	750424.051	2086966.057	2.5	3.0	Uranium-238	3.545	351	1.490	-	pCi/g
CV45-021	750416.602	2086970.549	0.0	2.0	Americium-241	9.588	76	0.020	-	pCi/g
CV45-021	***750416.602***	***2086970.549***	***0.0***	***2.0***	***Plutonium-239/240***	***54.652***	***50***	***0.020***	-	***pCi/g***
CV45-021	750416.602	2086970.549	0.0	2.0	Uranium-235	0.294	8	0.120	-	pCi/g
CV45-021	750416.602	2086970.549	0.0	2.0	Uranium-238	2.583	351	1.490	-	pCi/g
CV45-021	750416.602	2086970.549	2.0	2.5	Americium-241	13.750	76	0.020	-	pCi/g
CV45-021	***750416.602***	***2086970.549***	***2.0***	***2.5***	***Plutonium-239/240***	***78.375***	***50***	***0.020***	-	***pCi/g***
CV45-021	*750416.602*	*2086970.549*	*2.0*	*2.5*	*Uranium-234*	*7.493*	*300*	*2.640*	-	*pCi/g*
CV45-021	750416.602	2086970.549	2.0	2.5	Uranium-235	0.269	8	0.120	-	pCi/g
CV45-021	750416.602	2086970.549	2.0	2.5	Uranium-238	7.493	351	1.490	-	pCi/g
CV45-022	750440.605	2086953.031	0.0	1.0	Americium-241	74.680	76	0.020	-	pCi/g
CV45-022	***750440.605***	***2086953.031***	***0.0***	***1.0***	***Plutonium-239/240***	***425.676***	***50***	***0.020***	-	***pCi/g***
CV45-022	*750440.605*	*2086953.031*	*0.0*	*1.0*	*Uranium-234*	*11.850*	*300*	*2.640*	-	*pCi/g*
CV45-022	750440.605	2086953.031	0.0	1.0	Uranium-235	0.615	8	0.120	-	pCi/g
CV45-022	750440.605	2086953.031	0.0	1.0	Uranium-238	11.850	351	1.490	-	pCi/g
CV45-023	750450.199	2086946.042	0.0	0.5	Americium-241	66.510	76	0.023	-	pCi/g
CV45-023	***750450.199***	***2086946.042***	***0.0***	***0.5***	***Plutonium-239/240***	***379.107***	***50***	***0.066***	-	***pCi/g***
CV45-023	*750450.199*	*2086946.042*	*0.0*	*0.5*	*Uranium-234*	*13.700*	*300*	*2.253*	-	*pCi/g*
CV45-023	750450.199	2086946.042	0.0	0.5	Uranium-235	0.566	8	0.094	-	pCi/g
CV45-023	750450.199	2086946.042	0.0	0.5	Uranium-238	13.700	351	2.000	-	pCi/g
CV45-023	750450.199	2086946.042	0.5	1.0	Americium-241	24.260	76	0.020	-	pCi/g
CV45-023	***750450.199***	***2086946.042***	***0.5***	***1.0***	***Plutonium-239/240***	***138.282***	***50***	***0.020***	-	***pCi/g***
CV45-023	*750450.199*	*2086946.042*	*0.5*	*1.0*	*Uranium-234*	*7.279*	*300*	*2.640*	-	*pCi/g*
CV45-023	750450.199	2086946.042	0.5	1.0	Uranium-235	0.236	8	0.120	-	pCi/g
CV45-023	750450.199	2086946.042	0.5	1.0	Uranium-238	7.279	351	1.490	-	pCi/g
CV45-024	750401.471	2086934.263	0.0	1.0	Americium-241	9.226	76	0.020	-	pCi/g
CV45-024	***750401.471***	***2086934.263***	***0.0***	***1.0***	***Plutonium-239/240***	***52.588***	***50***	***0.020***	-	***pCi/g***
CV45-024	*750401.471*	*2086934.263*	*0.0*	*1.0*	*Uranium-234*	*5.714*	*300*	*2.640*	-	*pCi/g*
CV45-024	750401.471	2086934.263	0.0	1.0	Uranium-235	0.294	8	0.120	-	pCi/g
CV45-024	750401.471	2086934.263	0.0	1.0	Uranium-238	5.714	351	1.490	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-024	750401.471	2086934.263	1.0	3.0	Americium-241	43.990	76	0.020	-	pCi/g
CV45-024	***750401.471***	***2086934.263***	***1.0***	***3.0***	***Plutonium-239/240***	***250.743***	***50***	***0.020***	-	***pCi/g***
CV45-024	*750401.471*	*2086934.263*	*1.0*	*3.0*	*Uranium-234*	*5.365*	*300*	*2.640*	-	*pCi/g*
CV45-024	750401.471	2086934.263	1.0	3.0	Uranium-235	0.318	8	0.120	-	pCi/g
CV45-024	750401.471	2086934.263	1.0	3.0	Uranium-238	5.365	351	1.490	-	pCi/g
CV45-025	750391.795	2086938.791	0.0	1.0	Americium-241	4.845	76	0.020	-	pCi/g
CV45-025	*750391.795*	*2086938.791*	*0.0*	*1.0*	*Plutonium-239/240*	*27.617*	*50*	*0.020*	-	*pCi/g*
CV45-025	*750391.795*	*2086938.791*	*0.0*	*1.0*	*Uranium-234*	*7.068*	*300*	*2.640*	-	*pCi/g*
CV45-025	750391.795	2086938.791	0.0	1.0	Uranium-235	0.357	8	0.120	-	pCi/g
CV45-025	750391.795	2086938.791	0.0	1.0	Uranium-238	7.068	351	1.490	-	pCi/g
CV45-025	750391.795	2086938.791	2.5	3.0	Americium-241	21.280	76	0.020	-	pCi/g
CV45-025	***750391.795***	***2086938.791***	***2.5***	***3.0***	***Plutonium-239/240***	***121.296***	***50***	***0.020***	-	***pCi/g***
CV45-025	*750391.795*	*2086938.791*	*2.5*	*3.0*	*Uranium-234*	*11.010*	*300*	*2.640*	-	*pCi/g*
CV45-025	750391.795	2086938.791	2.5	3.0	Uranium-235	0.453	8	0.120	-	pCi/g
CV45-025	750391.795	2086938.791	2.5	3.0	Uranium-238	11.010	351	1.490	-	pCi/g
CV45-026	750510.2	2087095.858	0.0	0.2	Americium-241	29.710	76	0.023	-	pCi/g
CV45-026	***750510.2***	***2087095.858***	***0.0***	***0.2***	***Plutonium-239/240***	***169.347***	***50***	***0.066***	-	***pCi/g***
CV45-026	*750510.2*	*2087095.858*	*0.0*	*0.2*	*Uranium-234*	*4.159*	*300*	*2.253*	-	*pCi/g*
CV45-026	750510.2	2087095.858	0.0	0.2	Uranium-235	0.267	8	0.094	-	pCi/g
CV45-026	750510.2	2087095.858	0.0	0.2	Uranium-238	4.159	351	2.000	-	pCi/g
CV45-027	750496.863	2087101.607	0.0	0.2	Americium-241	25.640	76	0.023	-	pCi/g
CV45-027	***750496.863***	***2087101.607***	***0.0***	***0.2***	***Plutonium-239/240***	***146.148***	***50***	***0.066***	-	***pCi/g***
CV45-027	*750496.863*	*2087101.607*	*0.0*	*0.2*	*Uranium-234*	*2.581*	*300*	*2.253*	-	*pCi/g*
CV45-027	750496.863	2087101.607	0.0	0.2	Uranium-238	2.581	351	2.000	-	pCi/g
CV45-027	750496.863	2087101.607	1.1	1.3	Americium-241	7.581	76	0.020	-	pCi/g
CV45-027	*750496.863*	*2087101.607*	*1.1*	*1.3*	*Plutonium-239/240*	*43.212*	*50*	*0.020*	-	*pCi/g*
CV45-027	*750496.863*	*2087101.607*	*1.1*	*1.3*	*Uranium-234*	*2.997*	*300*	*2.640*	-	*pCi/g*
CV45-027	750496.863	2087101.607	1.1	1.3	Uranium-238	2.997	351	1.490	-	pCi/g
CV45-028	750485.941	2087107.399	0.0	0.2	Americium-241	20.930	76	0.023	-	pCi/g
CV45-028	***750485.941***	***2087107.399***	***0.0***	***0.2***	***Plutonium-239/240***	***119.301***	***50***	***0.066***	-	***pCi/g***
CV45-028	*750485.941*	*2087107.399*	*0.0*	*0.2*	*Uranium-234*	*2.885*	*300*	*2.253*	-	*pCi/g*

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-028	750485.941	2087107.399	0.0	0.2	Uranium-235	0.243	8	0.094	-	pCi/g
CV45-028	750485.941	2087107.399	0.0	0.2	Uranium-238	2.885	351	2.000	-	pCi/g
CV45-028	750485.941	2087107.399	0.6	0.7	Americium-241	2.017	76	0.020	-	pCi/g
CV45-028	*750485.941*	*2087107.399*	*0.6*	*0.7*	*Plutonium-239/240*	*11.497*	*50*	*0.020*	-	*pCi/g*
CV45-028	750485.941	2087107.399	0.6	0.7	Uranium-235	0.233	8	0.120	-	pCi/g
CV45-028	750485.941	2087107.399	0.6	0.7	Uranium-238	1.653	351	1.490	-	pCi/g
CV45-029	750471.261	2087037.901	0.0	0.2	Americium-241	46.260	76	0.023	-	pCi/g
CV45-029	***750471.261***	***2087037.901***	***0.0***	***0.2***	***Plutonium-239/240***	***263.682***	***50***	***0.066***	-	***pCi/g***
CV45-029	*750471.261*	*2087037.901*	*0.0*	*0.2*	*Uranium-234*	*5.650*	*300*	*2.253*	-	*pCi/g*
CV45-029	750471.261	2087037.901	0.0	0.2	Uranium-235	0.307	8	0.094	-	pCi/g
CV45-029	750471.261	2087037.901	0.0	0.2	Uranium-238	5.650	351	2.000	-	pCi/g
CV45-030	750462.14	2087042.186	0.0	0.2	Americium-241	12.560	76	0.023	-	pCi/g
CV45-030	***750462.14***	***2087042.186***	***0.0***	***0.2***	***Plutonium-239/240***	***71.592***	***50***	***0.066***	-	***pCi/g***
CV45-030	*750462.14*	*2087042.186*	*0.0*	*0.2*	*Uranium-234*	*3.494*	*300*	*2.253*	-	*pCi/g*
CV45-030	750462.14	2087042.186	0.0	0.2	Uranium-235	0.226	8	0.094	-	pCi/g
CV45-030	750462.14	2087042.186	0.0	0.2	Uranium-238	3.494	351	2.000	-	pCi/g
CV45-030	750462.14	2087042.186	0.8	1.0	Americium-241	3.180	76	0.020	-	pCi/g
CV45-030	*750462.14*	*2087042.186*	*0.8*	*1.0*	*Plutonium-239/240*	*18.126*	*50*	*0.020*	-	*pCi/g*
CV45-030	750462.14	2087042.186	0.8	1.0	Uranium-235	0.178	8	0.120	-	pCi/g
CV45-031	750454.988	2087045.867	0.0	0.2	Americium-241	1.098	76	0.023	-	pCi/g
CV45-031	*750454.988*	*2087045.867*	*0.0*	*0.2*	*Plutonium-239/240*	*6.259*	*50*	*0.066*	-	*pCi/g*
CV45-031	750454.988	2087045.867	0.0	0.2	Uranium-235	0.230	8	0.094	-	pCi/g
CV45-031	750454.988	2087045.867	0.0	0.2	Uranium-238	2.241	351	2.000	-	pCi/g
CV45-031	750454.988	2087045.867	0.7	0.9	Uranium-235	0.141	8	0.120	-	pCi/g
CV45-032	750431.261	2086960.034	0.0	0.2	Americium-241	9.677	76	0.023	-	pCi/g
CV45-032	***750431.261***	***2086960.034***	***0.0***	***0.2***	***Plutonium-239/240***	***55.159***	***50***	***0.066***	-	***pCi/g***
CV45-032	*750431.261*	*2086960.034*	*0.0*	*0.2*	*Uranium-234*	*4.456*	*300*	*2.253*	-	*pCi/g*
CV45-032	750431.261	2086960.034	0.0	0.2	Uranium-235	0.236	8	0.094	-	pCi/g
CV45-032	750431.261	2086960.034	0.0	0.2	Uranium-238	4.456	351	2.000	-	pCi/g
CV45-032	750431.261	2086960.034	1.3	1.5	Americium-241	75.050	76	0.020	-	pCi/g
CV45-032	***750431.261***	***2086960.034***	***1.3***	***1.5***	***Plutonium-239/240***	***427.785***	***50***	***0.020***	-	***pCi/g***

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-032	750431.261	2086960.034	1.3	1.5	Uranium-234	7.637	300	2.640	-	pCi/g
CV45-032	750431.261	2086960.034	1.3	1.5	Uranium-235	0.400	8	0.120	-	pCi/g
CV45-032	750431.261	2086960.034	1.3	1.5	Uranium-238	7.637	351	1.490	-	pCi/g
CV45-033	750491.622	2086995.534	0.0	0.2	Americium-241	12.150	76	0.023	-	pCi/g
CV45-033	**750491.622**	**2086995.534**	**0.0**	**0.2**	**Plutonium-239/240**	**69.255**	**50**	**0.066**	**-**	**pCi/g**
CV45-033	750491.622	2086995.534	0.0	0.2	Uranium-234	3.275	300	2.253	-	pCi/g
CV45-033	750491.622	2086995.534	0.0	0.2	Uranium-238	3.275	351	2.000	-	pCi/g
CV45-034	750493.747	2086993.848	0.0	0.2	Americium-241	5.321	76	0.023	-	pCi/g
CV45-034	750493.747	2086993.848	0.0	0.2	Plutonium-239/240	30.330	50	0.066	-	pCi/g
CV45-034	750493.747	2086993.848	0.0	0.2	Uranium-234	3.517	300	2.253	-	pCi/g
CV45-034	750493.747	2086993.848	0.0	0.2	Uranium-235	0.306	8	0.094	-	pCi/g
CV45-034	750493.747	2086993.848	0.0	0.2	Uranium-238	3.517	351	2.000	-	pCi/g
CV45-034	750493.747	2086993.848	0.8	1.0	Americium-241	42.040	76	0.020	-	pCi/g
CV45-034	**750493.747**	**2086993.848**	**0.8**	**1.0**	**Plutonium-239/240**	**239.628**	**50**	**0.020**	**-**	**pCi/g**
CV45-034	750493.747	2086993.848	0.8	1.0	Uranium-234	7.636	300	2.640	-	pCi/g
CV45-034	750493.747	2086993.848	0.8	1.0	Uranium-235	0.271	8	0.120	-	pCi/g
CV45-034	750493.747	2086993.848	0.8	1.0	Uranium-238	7.636	351	1.490	-	pCi/g
CV45-035	750496.213	2086990.33	0.0	0.2	Americium-241	1.498	76	0.023	-	pCi/g
CV45-035	750496.213	2086990.33	0.0	0.2	Plutonium-239/240	8.539	50	0.066	-	pCi/g
CV45-035	750496.213	2086990.33	0.0	0.2	Uranium-235	0.163	8	0.094	-	pCi/g
CV45-035	750496.213	2086990.33	0.8	1.0	Americium-241	0.906	76	0.020	-	pCi/g
CV45-035	750496.213	2086990.33	0.8	1.0	Plutonium-239/240	5.162	50	0.020	-	pCi/g
CV45-035	750496.213	2086990.33	0.8	1.0	Uranium-238	1.923	351	1.490	-	pCi/g
CV45-036	750534.965	2087038.675	0.0	0.2	Americium-241	4.779	76	0.023	-	pCi/g
CV45-036	750534.965	2087038.675	0.0	0.2	Plutonium-239/240	27.240	50	0.066	-	pCi/g
CV45-036	750534.965	2087038.675	0.0	0.2	Uranium-235	0.208	8	0.094	-	pCi/g
CV45-036	750534.965	2087038.675	0.0	0.2	Uranium-238	2.082	351	2.000	-	pCi/g
CV45-037	750541.461	2087032.495	0.0	0.2	Americium-241	3.296	76	0.023	-	pCi/g
CV45-037	750541.461	2087032.495	0.0	0.2	Plutonium-239/240	18.787	50	0.066	-	pCi/g
CV45-037	750541.461	2087032.495	0.0	0.2	Uranium-234	3.227	300	2.253	-	pCi/g
CV45-037	750541.461	2087032.495	0.0	0.2	Uranium-235	0.221	8	0.094	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-037	750541.461	2087032.495	0.0	0.2	Uranium-238	3.227	351	2.000	-	pCi/g
CV45-037	750541.461	2087032.495	0.8	1.0	Americium-241	2.100	76	0.020	-	pCi/g
CV45-037	*750541.461*	*2087032.495*	*0.8*	*1.0*	*Plutonium-239/240*	*11.970*	*50*	*0.020*	-	*pCi/g*
CV45-037	750541.461	2087032.495	0.8	1.0	Uranium-238	1.977	351	1.490	-	pCi/g
CV45-038	750547.384	2087029.143	0.0	0.2	Americium-241	1.095	76	0.023	-	pCi/g
CV45-038	*750547.384*	*2087029.143*	*0.0*	*0.2*	*Plutonium-239/240*	*6.242*	*50*	*0.066*	-	*pCi/g*
CV45-038	*750547.384*	*2087029.143*	*0.0*	*0.2*	*Uranium-234*	*3.780*	*300*	*2.253*	-	*pCi/g*
CV45-038	750547.384	2087029.143	0.0	0.2	Uranium-235	0.135	8	0.094	-	pCi/g
CV45-038	750547.384	2087029.143	0.0	0.2	Uranium-238	3.780	351	2.000	-	pCi/g
CV45-038	750547.384	2087029.143	0.3	0.5	Americium-241	0.927	76	0.023	-	pCi/g
CV45-038	*750547.384*	*2087029.143*	*0.3*	*0.5*	*Plutonium-239/240*	*5.282*	*50*	*0.066*	-	*pCi/g*
CV45-038	750547.384	2087029.143	0.3	0.5	Uranium-235	0.247	8	0.094	-	pCi/g
CV45-039	750539.81	2087128.342	0.0	0.3	Americium-241	7.489	76	0.023	-	pCi/g
CV45-039	*750539.81*	*2087128.342*	*0.0*	*0.3*	*Plutonium-239/240*	*42.687*	*50*	*0.066*	-	*pCi/g*
CV45-039	*750539.81*	*2087128.342*	*0.0*	*0.3*	*Uranium-234*	*2.459*	*300*	*2.253*	-	*pCi/g*
CV45-039	750539.81	2087128.342	0.0	0.3	Uranium-238	2.459	351	2.000	-	pCi/g
CV45-040	750540.893	2087129.85	0.0	0.3	Americium-241	6.655	76	0.023	-	pCi/g
CV45-040	*750540.893*	*2087129.85*	*0.0*	*0.3*	*Plutonium-239/240*	*37.934*	*50*	*0.066*	-	*pCi/g*
CV45-040	*750540.893*	*2087129.85*	*0.0*	*0.3*	*Uranium-234*	*3.984*	*300*	*2.253*	-	*pCi/g*
CV45-040	750540.893	2087129.85	0.0	0.3	Uranium-235	0.224	8	0.094	-	pCi/g
CV45-040	750540.893	2087129.85	0.0	0.3	Uranium-238	3.984	351	2.000	-	pCi/g
CV45-040	750540.893	2087129.85	1.5	1.8	Americium-241	36.560	76	0.020	-	pCi/g
CV45-040	***750540.893***	***2087129.85***	***1.5***	***1.8***	***Plutonium-239/240***	***208.392***	***50***	***0.020***	-	***pCi/g***
CV45-040	*750540.893*	*2087129.85*	*1.5*	*1.8*	*Uranium-234*	*4.486*	*300*	*2.640*	-	*pCi/g*
CV45-040	750540.893	2087129.85	1.5	1.8	Uranium-235	0.224	8	0.120	-	pCi/g
CV45-040	750540.893	2087129.85	1.5	1.8	Uranium-238	4.486	351	1.490	-	pCi/g
CV45-041	750556.808	2087118.126	0.0	0.3	Americium-241	17.560	76	0.023	-	pCi/g
CV45-041	***750556.808***	***2087118.126***	***0.0***	***0.3***	***Plutonium-239/240***	***100.092***	***50***	***0.066***	-	***pCi/g***
CV45-041	*750556.808*	*2087118.126*	*0.0*	*0.3*	*Uranium-234*	*3.210*	*300*	*2.253*	-	*pCi/g*
CV45-041	750556.808	2087118.126	0.0	0.3	Uranium-235	0.306	8	0.094	-	pCi/g
CV45-041	750556.808	2087118.126	0.0	0.3	Uranium-238	3.210	351	2.000	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-042	750558.332	2087120.833	1.0	1.3	Americium-241	6.283	76	0.020	-	pCi/g
CV45-042	*750558.332*	*2087120.833*	*1.0*	*1.3*	*Plutonium-239/240*	*35.813*	*50*	*0.020*	-	*pCi/g*
CV45-042	*750558.332*	*2087120.833*	*1.0*	*1.3*	*Uranium-234*	*3.191*	*300*	*2.640*	-	*pCi/g*
CV45-042	750558.332	2087120.833	1.0	1.3	Uranium-235	0.223	8	0.120	-	pCi/g
CV45-042	750558.332	2087120.833	1.0	1.3	Uranium-238	3.191	351	1.490	-	pCi/g
CW45-002	750544.722	2087134.287	0.0	0.5	Americium-241	0.985	76	0.023	-	pCi/g
CW45-002	*750544.722*	*2087134.287*	*0.0*	*0.5*	*Plutonium-239/240*	*5.613*	*50*	*0.066*	-	*pCi/g*
CW45-002	750544.722	2087134.287	0.0	0.5	Uranium-235	0.182	8	0.094	-	pCi/g
CW45-002	750544.722	2087134.287	0.5	1.0	Americium-241	0.771	76	0.020	-	pCi/g
CW45-002	*750544.722*	*2087134.287*	*0.5*	*1.0*	*Plutonium-239/240*	*4.395*	*50*	*0.020*	-	*pCi/g*
CW45-002	750544.722	2087134.287	0.5	1.0	Uranium-238	1.723	351	1.490	-	pCi/g
CW45-003	*750546.757*	*2087139.417*	*0.0*	*0.5*	*Uranium-234*	*2.359*	*300*	*2.253*	-	*pCi/g*
CW45-003	750546.757	2087139.417	0.0	0.5	Uranium-238	2.359	351	2.000	-	pCi/g
CW45-003	750546.757	2087139.417	0.5	1.0	Uranium-235	0.189	8	0.120	-	pCi/g
CW45-003	750546.757	2087139.417	0.5	1.0	Uranium-238	1.616	351	1.490	-	pCi/g
CW45-004	750606.503	2087203.314	0.0	0.1	Americium-241	10.100	76	0.023	-	pCi/g
CW45-004	750606.503	2087203.314	0.0	0.1	Plutonium-239/240	30.700	50	0.066	-	pCi/g
CW45-004	750606.503	2087203.314	0.0	0.1	Uranium-238	3.220	351	2.000	-	pCi/g
CW45-004	**750606.503**	**2087203.314**	**1.5**	**2.0**	**Americium-241**	**291.000**	**76**	**0.020**	**-**	**pCi/g**
CW45-004	**750606.503**	**2087203.314**	**1.5**	**2.0**	**Plutonium-239/240**	**1120.000**	**50**	**0.020**	**-**	**pCi/g**
CW45-004	750606.503	2087203.314	1.5	2.0	Uranium-234	11.600	300	2.640	-	pCi/g
CW45-004	750606.503	2087203.314	1.5	2.0	Uranium-235	0.711	8	0.120	-	pCi/g
CW45-004	750606.503	2087203.314	1.5	2.0	Uranium-238	23.600	351	1.490	-	pCi/g
CW45-005	750612.035	2087211.366	0.0	0.5	Americium-241	1.356	76	0.023	-	pCi/g
CW45-005	*750612.035*	*2087211.366*	*0.0*	*0.5*	*Plutonium-239/240*	*7.729*	*50*	*0.066*	-	*pCi/g*
CW45-005	*750612.035*	*2087211.366*	*0.0*	*0.5*	*Uranium-234*	*2.636*	*300*	*2.253*	-	*pCi/g*
CW45-005	750612.035	2087211.366	0.0	0.5	Uranium-235	0.206	8	0.094	-	pCi/g
CW45-005	750612.035	2087211.366	0.0	0.5	Uranium-238	2.636	351	2.000	-	pCi/g
CW45-005	*750612.035*	*2087211.366*	*0.5*	*1.0*	*Uranium-234*	*5.107*	*300*	*2.640*	-	*pCi/g*
CW45-005	750612.035	2087211.366	0.5	1.0	Uranium-235	0.270	8	0.120	-	pCi/g
CW45-005	750612.035	2087211.366	0.5	1.0	Uranium-238	5.107	351	1.490	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CW46-017	**750636.498**	**2087198.402**	**0.0**	**0.5**	**Americium-241**	**287.000**	**76**	**0.023**	-	**pCi/g**
CW46-017	***750636.498***	***2087198.402***	***0.0***	***0.5***	***Plutonium-239/240***	***1635.900***	***50***	***0.066***	-	***pCi/g***
CW46-017	*750636.498*	*2087198.402*	*0.0*	*0.5*	*Uranium-234*	*15.410*	*300*	*2.253*	-	*pCi/g*
CW46-017	750636.498	2087198.402	0.0	0.5	Uranium-235	0.388	8	0.094	-	pCi/g
CW46-017	750636.498	2087198.402	0.0	0.5	Uranium-238	15.410	351	2.000	-	pCi/g
CW46-017	**750636.498**	**2087198.402**	**2.0**	**2.5**	**Americium-241**	**148.300**	**76**	**0.020**	-	**pCi/g**
CW46-017	***750636.498***	***2087198.402***	***2.0***	***2.5***	***Plutonium-239/240***	***845.310***	***50***	***0.020***	-	***pCi/g***
CW46-017	*750636.498*	*2087198.402*	*2.0*	*2.5*	*Uranium-234*	*8.983*	*300*	*2.640*	-	*pCi/g*
CW46-017	750636.498	2087198.402	2.0	2.5	Uranium-235	0.285	8	0.120	-	pCi/g
CW46-017	750636.498	2087198.402	2.0	2.5	Uranium-238	8.983	351	1.490	-	pCi/g
CW46-018	750636.911	2087214.192	0.0	0.5	Americium-241	1.081	76	0.023	-	pCi/g
CW46-018	*750636.911*	*2087214.192*	*0.0*	*0.5*	*Plutonium-239/240*	*6.162*	*50*	*0.066*	-	*pCi/g*
CW46-018	750636.911	2087214.192	0.0	0.5	Uranium-235	0.141	8	0.094	-	pCi/g
CW46-018	750636.911	2087214.192	0.5	1.0	Americium-241	0.635	76	0.020	-	pCi/g
CW46-018	*750636.911*	*2087214.192*	*0.5*	*1.0*	*Plutonium-239/240*	*3.619*	*50*	*0.020*	-	*pCi/g*
CW46-018	750636.911	2087214.192	0.5	1.0	Uranium-235	0.178	8	0.120	-	pCi/g
CW46-018	750636.911	2087214.192	0.5	1.0	Uranium-238	1.664	351	1.490	-	pCi/g
CW46-019	750664.649	2087323.055	0.0	0.5	Americium-241	7.991	76	0.023	-	pCi/g
CW46-019	*750664.649*	*2087323.055*	*0.0*	*0.5*	*Plutonium-239/240*	*45.549*	*50*	*0.066*	-	*pCi/g*
CW46-019	*750664.649*	*2087323.055*	*0.0*	*0.5*	*Uranium-234*	*2.384*	*300*	*2.253*	-	*pCi/g*
CW46-019	750664.649	2087323.055	0.0	0.5	Uranium-235	0.279	8	0.094	-	pCi/g
CW46-019	750664.649	2087323.055	0.0	0.5	Uranium-238	2.384	351	2.000	-	pCi/g
CW46-019	**750664.649**	**2087323.055**	**2.5**	**3.0**	**Americium-241**	**135.200**	**76**	**0.020**	-	**pCi/g**
CW46-019	***750664.649***	***2087323.055***	***2.5***	***3.0***	***Plutonium-239/240***	***770.640***	***50***	***0.020***	-	***pCi/g***
CW46-019	*750664.649*	*2087323.055*	*2.5*	*3.0*	*Uranium-234*	*26.240*	*300*	*2.640*	-	*pCi/g*
CW46-019	750664.649	2087323.055	2.5	3.0	Uranium-235	1.519	8	0.120	-	pCi/g
CW46-019	750664.649	2087323.055	2.5	3.0	Uranium-238	26.240	351	1.490	-	pCi/g
CW46-020	750676.218	2087321.87	0.0	0.5	Americium-241	0.425	76	0.023	-	pCi/g
CW46-020	*750676.218*	*2087321.87*	*0.0*	*0.5*	*Plutonium-239/240*	*2.420*	*50*	*0.066*	-	*pCi/g*
CW46-020	750676.218	2087321.87	0.0	0.5	Uranium-235	0.182	8	0.094	-	pCi/g
CW46-020	750676.218	2087321.87	2.0	3.0	Americium-241	1.045	76	0.020	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CW46-020	*750676.218*	*2087321.87*	*2.0*	*3.0*	*Plutonium-239/240*	*5.957*	*50*	*0.020*	-	*pCi/g*
CW46-020	750676.218	2087321.87	2.0	3.0	Uranium-238	1.872	351	1.490	-	pCi/g
CX45-002	750608.75	2087325.924	0.0	0.5	Americium-241	0.965	76	0.023	-	pCi/g
CX45-002	*750608.75*	*2087325.924*	*0.0*	*0.5*	*Plutonium-239/240*	*5.501*	*50*	*0.066*	-	*pCi/g*
CX45-002	750608.75	2087325.924	0.0	0.5	Uranium-235	0.232	8	0.094	-	pCi/g
CX45-002	750608.75	2087325.924	0.0	0.5	Uranium-238	2.127	351	2.000	-	pCi/g
CX45-002	*750608.75*	*2087325.924*	*1.0*	*1.5*	*Uranium-234*	*2.754*	*300*	*2.640*	-	*pCi/g*
CX45-002	750608.75	2087325.924	1.0	1.5	Uranium-238	2.754	351	1.490	-	pCi/g
CX46-023	750613.009	2087327.922	0.0	0.5	Americium-241	4.622	76	0.023	-	pCi/g
CX46-023	*750613.009*	*2087327.922*	*0.0*	*0.5*	*Plutonium-239/240*	*26.345*	*50*	*0.066*	-	*pCi/g*
CX46-023	*750613.009*	*2087327.922*	*0.0*	*0.5*	*Uranium-234*	*2.474*	*300*	*2.253*	-	*pCi/g*
CX46-023	750613.009	2087327.922	0.0	0.5	Uranium-235	0.180	8	0.094	-	pCi/g
CX46-023	750613.009	2087327.922	0.0	0.5	Uranium-238	2.474	351	2.000	-	pCi/g
CX46-023	750613.009	2087327.922	0.5	1.0	Americium-241	5.032	76	0.020	-	pCi/g
CX46-023	*750613.009*	*2087327.922*	*0.5*	*1.0*	*Plutonium-239/240*	*28.682*	*50*	*0.020*	-	*pCi/g*
CX46-023	*750613.009*	*2087327.922*	*0.5*	*1.0*	*Uranium-234*	*2.805*	*300*	*2.640*	-	*pCi/g*
CX46-023	750613.009	2087327.922	0.5	1.0	Uranium-235	0.275	8	0.120	-	pCi/g
CX46-023	750613.009	2087327.922	0.5	1.0	Uranium-238	2.805	351	1.490	-	pCi/g
CX46-024	750673.883	2087418.411	0.0	0.5	Americium-241	2.174	76	0.023	-	pCi/g
CX46-024	*750673.883*	*2087418.411*	*0.0*	*0.5*	*Plutonium-239/240*	*12.392*	*50*	*0.066*	-	*pCi/g*
CX46-024	*750673.883*	*2087418.411*	*0.0*	*0.5*	*Uranium-234*	*2.347*	*300*	*2.253*	-	*pCi/g*
CX46-024	750673.883	2087418.411	0.0	0.5	Uranium-235	0.219	8	0.094	-	pCi/g
CX46-024	750673.883	2087418.411	0.0	0.5	Uranium-238	2.347	351	2.000	-	pCi/g
CX46-024	750673.883	2087418.411	2.5	3.0	Americium-241	52.080	76	0.020	-	pCi/g
CX46-024	***750673.883***	***2087418.411***	***2.5***	***3.0***	***Plutonium-239/240***	***296.856***	***50***	***0.020***	-	***pCi/g***
CX46-024	*750673.883*	*2087418.411*	*2.5*	*3.0*	*Uranium-234*	*13.830*	*300*	*2.640*	-	*pCi/g*
CX46-024	750673.883	2087418.411	2.5	3.0	Uranium-235	0.927	8	0.120	-	pCi/g
CX46-024	750673.883	2087418.411	2.5	3.0	Uranium-238	13.830	351	1.490	-	pCi/g
CX47-000	750680.149	2087413.446	0.0	0.5	Americium-241	1.046	76	0.023	-	pCi/g
CX47-000	*750680.149*	*2087413.446*	*0.0*	*0.5*	*Plutonium-239/240*	*5.962*	*50*	*0.066*	-	*pCi/g*
CX47-000	750680.149	2087413.446	0.0	0.5	Uranium-235	0.160	8	0.094	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CX47-000	750680.149	2087413.446	0.0	0.5	Uranium-238	2.027	351	2.000	-	pCi/g
CX47-000	750680.149	2087413.446	0.5	1.5	Uranium-238	2.285	351	1.490	-	pCi/g
CY46-005	750565.53	2087456.108	0.0	0.5	Americium-241	1.136	76	0.023	-	pCi/g
CY46-005	*750565.53*	*2087456.108*	*0.0*	*0.5*	*Plutonium-239/240*	*6.475*	*50*	*0.066*	-	*pCi/g*
CY46-005	750565.53	2087456.108	0.5	1.0	Americium-241	4.654	76	0.020	-	pCi/g
CY46-005	*750565.53*	*2087456.108*	*0.5*	*1.0*	*Plutonium-239/240*	*26.528*	*50*	*0.020*	-	*pCi/g*
CY46-005	750565.53	2087456.108	0.5	1.0	Uranium-235	0.173	8	0.120	-	pCi/g
CY46-005	750565.53	2087456.108	0.5	1.0	Uranium-238	1.884	351	1.490	-	pCi/g
CY46-006	750571.12	2087454.748	0.0	0.5	Americium-241	2.700	76	0.023	-	pCi/g
CY46-006	*750571.12*	*2087454.748*	*0.0*	*0.5*	*Plutonium-239/240*	*15.390*	*50*	*0.066*	-	*pCi/g*
CY46-006	*750571.12*	*2087454.748*	*0.0*	*0.5*	*Uranium-234*	*4.429*	*300*	*2.253*	-	*pCi/g*
CY46-006	750571.12	2087454.748	0.0	0.5	Uranium-238	4.429	351	2.000	-	pCi/g
CY46-006	750571.12	2087454.748	0.5	1.0	Americium-241	0.866	76	0.020	-	pCi/g
CY46-006	*750571.12*	*2087454.748*	*0.5*	*1.0*	*Plutonium-239/240*	*4.934*	*50*	*0.020*	-	*pCi/g*
CY46-006	*750571.12*	*2087454.748*	*0.5*	*1.0*	*Uranium-234*	*5.082*	*300*	*2.640*	-	*pCi/g*
CY46-006	750571.12	2087454.748	0.5	1.0	Uranium-235	0.267	8	0.120	-	pCi/g
CY46-006	750571.12	2087454.748	0.5	1.0	Uranium-238	5.082	351	1.490	-	pCi/g
CY46-007	750710.87	2087639.725	0.0	0.5	Americium-241	4.480	76	0.023	-	pCi/g
CY46-007	750710.87	2087639.725	0.0	0.5	Plutonium-239/240	10.400	50	0.066	-	pCi/g
CY46-007	750710.87	2087639.725	0.5	1.0	Americium-241	0.386	76	0.020	-	pCi/g
CY46-007	750710.87	2087639.725	0.5	1.0	Plutonium-239/240	0.970	50	0.020	-	pCi/g
CY46-008	750736.701	2087710.251	0.0	0.5	Americium-241	1.987	76	0.023	-	pCi/g
CY46-008	*750736.701*	*2087710.251*	*0.0*	*0.5*	*Plutonium-239/240*	*11.326*	*50*	*0.066*	-	*pCi/g*
CY46-008	*750736.701*	*2087710.251*	*0.0*	*0.5*	*Uranium-234*	*2.397*	*300*	*2.253*	-	*pCi/g*
CY46-008	750736.701	2087710.251	0.0	0.5	Uranium-235	0.208	8	0.094	-	pCi/g
CY46-008	750736.701	2087710.251	0.0	0.5	Uranium-238	2.397	351	2.000	-	pCi/g
CY46-008	750736.701	2087710.251	0.5	1.0	Americium-241	0.282	76	0.020	-	pCi/g
CY46-008	*750736.701*	*2087710.251*	*0.5*	*1.0*	*Plutonium-239/240*	*1.607*	*50*	*0.020*	-	*pCi/g*
CY46-008	750736.701	2087710.251	0.5	1.0	Uranium-235	0.147	8	0.120	-	pCi/g
CY46-008	750736.701	2087710.251	0.5	1.0	Uranium-238	1.640	351	1.490	-	pCi/g
CY47-003	750643.455	2087511.731	0.0	0.5	Americium-241	0.874	76	0.023	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CY47-003	*750643.455*	*2087511.731*	*0.0*	*0.5*	*Plutonium-239/240*	*4.981*	*50*	*0.066*	-	*pCi/g*
CY47-003	*750643.455*	*2087511.731*	*0.0*	*0.5*	*Uranium-234*	*2.259*	*300*	*2.253*	-	*pCi/g*
CY47-003	750643.455	2087511.731	0.0	0.5	Uranium-235	0.208	8	0.094	-	pCi/g
CY47-003	750643.455	2087511.731	0.0	0.5	Uranium-238	2.259	351	2.000	-	pCi/g
CY47-003	750643.455	2087511.731	0.5	1.0	Americium-241	4.594	76	0.020	-	pCi/g
CY47-003	*750643.455*	*2087511.731*	*0.5*	*1.0*	*Plutonium-239/240*	*26.186*	*50*	*0.020*	-	*pCi/g*
CY47-003	750643.455	2087511.731	0.5	1.0	Uranium-235	0.179	8	0.120	-	pCi/g
CY47-003	750643.455	2087511.731	0.5	1.0	Uranium-238	2.337	351	1.490	-	pCi/g
CY47-004	750685.704	2087503.355	0.0	0.5	Americium-241	4.775	76	0.023	-	pCi/g
CY47-004	*750685.704*	*2087503.355*	*0.0*	*0.5*	*Plutonium-239/240*	*27.218*	*50*	*0.066*	-	*pCi/g*
CY47-004	*750685.704*	*2087503.355*	*0.0*	*0.5*	*Uranium-234*	*3.540*	*300*	*2.253*	-	*pCi/g*
CY47-004	750685.704	2087503.355	0.0	0.5	Uranium-238	3.540	351	2.000	-	pCi/g
CY47-004	750685.704	2087503.355	0.0	1.0	Americium-241	32.280	76	0.020	-	pCi/g
CY47-004	***750685.704***	***2087503.355***	***0.0***	***1.0***	***Plutonium-239/240***	***183.996***	***50***	***0.020***	-	***pCi/g***
CY47-004	*750685.704*	*2087503.355*	*0.0*	*1.0*	*Uranium-234*	*6.060*	*300*	*2.640*	-	*pCi/g*
CY47-004	750685.704	2087503.355	0.0	1.0	Uranium-235	0.234	8	0.120	-	pCi/g
CY47-004	750685.704	2087503.355	0.0	1.0	Uranium-238	6.060	351	1.490	-	pCi/g
CY47-005	750687.01	2087511.614	0.0	0.5	Americium-241	1.516	76	0.023	-	pCi/g
CY47-005	*750687.01*	*2087511.614*	*0.0*	*0.5*	*Plutonium-239/240*	*8.641*	*50*	*0.066*	-	*pCi/g*
CY47-005	750687.01	2087511.614	0.0	0.5	Uranium-235	0.210	8	0.094	-	pCi/g
CY47-005	750687.01	2087511.614	0.1	1.5	Uranium-235	0.238	8	0.120	-	pCi/g
CY47-005	750687.01	2087511.614	0.1	1.5	Uranium-238	2.490	351	1.490	-	pCi/g
CY47-006	750645.731	2087517.962	0.0	0.5	Americium-241	0.843	76	0.023	-	pCi/g
CY47-006	*750645.731*	*2087517.962*	*0.0*	*0.5*	*Plutonium-239/240*	*4.802*	*50*	*0.066*	-	*pCi/g*
CY47-006	*750645.731*	*2087517.962*	*0.0*	*0.5*	*Uranium-234*	*4.460*	*300*	*2.253*	-	*pCi/g*
CY47-006	750645.731	2087517.962	0.0	0.5	Uranium-235	0.255	8	0.094	-	pCi/g
CY47-006	750645.731	2087517.962	0.0	0.5	Uranium-238	4.460	351	2.000	-	pCi/g
CY47-006	*750645.731*	*2087517.962*	*1.0*	*1.5*	*Uranium-234*	*5.090*	*300*	*2.640*	-	*pCi/g*
CY47-006	750645.731	2087517.962	1.0	1.5	Uranium-235	0.171	8	0.120	-	pCi/g
CY47-006	750645.731	2087517.962	1.0	1.5	Uranium-238	5.090	351	1.490	-	pCi/g
CY47-007	750750.457	2087619.936	0.0	0.5	Americium-241	2.171	76	0.023	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CY47-007	*750750.457*	*2087619.936*	*0.0*	*0.5*	*Plutonium-239/240*	*12.375*	*50*	*0.066*	-	*pCi/g*
CY47-007	*750750.457*	*2087619.936*	*0.0*	*0.5*	*Uranium-234*	*3.306*	*300*	*2.253*	-	*pCi/g*
CY47-007	750750.457	2087619.936	0.0	0.5	Uranium-235	0.178	8	0.094	-	pCi/g
CY47-007	750750.457	2087619.936	0.0	0.5	Uranium-238	3.306	351	2.000	-	pCi/g
CY47-007	750750.457	2087619.936	0.5	1.0	Americium-241	0.363	76	0.020	-	pCi/g
CY47-007	*750750.457*	*2087619.936*	*0.5*	*1.0*	*Plutonium-239/240*	*2.067*	*50*	*0.020*	-	*pCi/g*
CY47-007	750750.457	2087619.936	0.5	1.0	Uranium-238	1.892	351	1.490	-	pCi/g
CY47-008	750786.298	2087676.273	0.0	0.5	Americium-241	1.110	76	0.023	-	pCi/g
CY47-008	*750786.298*	*2087676.273*	*0.0*	*0.5*	*Plutonium-239/240*	*6.327*	*50*	*0.066*	-	*pCi/g*
CY47-008	*750786.298*	*2087676.273*	*0.0*	*0.5*	*Uranium-234*	*6.370*	*300*	*2.253*	-	*pCi/g*
CY47-008	750786.298	2087676.273	0.0	0.5	Uranium-235	0.306	8	0.094	-	pCi/g
CY47-008	750786.298	2087676.273	0.0	0.5	Uranium-238	6.370	351	2.000	-	pCi/g
CY47-008	*750786.298*	*2087676.273*	*0.5*	*1.0*	*Uranium-234*	*6.805*	*300*	*2.640*	-	*pCi/g*
CY47-008	750786.298	2087676.273	0.5	1.0	Uranium-235	0.218	8	0.120	-	pCi/g
CY47-008	750786.298	2087676.273	0.5	1.0	Uranium-238	6.805	351	1.490	-	pCi/g
CY47-009	*750816.758*	*2087735.442*	*0.0*	*0.5*	*Uranium-234*	*5.973*	*300*	*2.253*	-	*pCi/g*
CY47-009	750816.758	2087735.442	0.0	0.5	Uranium-238	5.973	351	2.000	-	pCi/g
CY47-009	*750816.758*	*2087735.442*	*0.5*	*1.5*	*Uranium-234*	*3.862*	*300*	*2.640*	-	*pCi/g*
CY47-009	750816.758	2087735.442	0.5	1.5	Uranium-238	3.862	351	1.490	-	pCi/g
CZ46-005	750728.61	2087745.731	0.0	0.5	Americium-241	0.820	76	0.023	-	pCi/g
CZ46-005	*750728.61*	*2087745.731*	*0.0*	*0.5*	*Plutonium-239/240*	*4.674*	*50*	*0.066*	-	*pCi/g*
CZ46-005	750728.61	2087745.731	0.0	0.5	Uranium-235	0.186	8	0.094	-	pCi/g
CZ46-005	750728.61	2087745.731	0.5	1.0	Uranium-238	2.232	351	1.490	-	pCi/g
CZ46-006	750730.138	2087810.673	0.0	0.5	Americium-241	1.122	76	0.023	-	pCi/g
CZ46-006	*750730.138*	*2087810.673*	*0.0*	*0.5*	*Plutonium-239/240*	*6.395*	*50*	*0.066*	-	*pCi/g*
CZ46-006	*750730.138*	*2087810.673*	*0.0*	*0.5*	*Uranium-234*	*4.085*	*300*	*2.253*	-	*pCi/g*
CZ46-006	750730.138	2087810.673	0.0	0.5	Uranium-238	4.085	351	2.000	-	pCi/g
CZ46-006	*750730.138*	*2087810.673*	*0.5*	*1.0*	*Uranium-234*	*4.928*	*300*	*2.640*	-	*pCi/g*
CZ46-006	750730.138	2087810.673	0.5	1.0	Uranium-235	0.266	8	0.120	-	pCi/g
CZ46-006	750730.138	2087810.673	0.5	1.0	Uranium-238	4.928	351	1.490	-	pCi/g
CZ47-014	750830.315	2087846.11	0.0	0.5	Americium-241	2.146	76	0.023	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CZ47-014	*750830.315*	*2087846.11*	*0.0*	*0.5*	*Plutonium-239/240*	*12.232*	*50*	*0.066*	-	*pCi/g*
CZ47-014	*750830.315*	*2087846.11*	*0.0*	*0.5*	*Uranium-234*	*8.436*	*300*	*2.253*	-	*pCi/g*
CZ47-014	750830.315	2087846.11	0.0	0.5	Uranium-235	0.363	8	0.094	-	pCi/g
CZ47-014	750830.315	2087846.11	0.0	0.5	Uranium-238	8.436	351	2.000	-	pCi/g
CZ47-014	750830.315	2087846.11	0.5	1.0	Americium-241	5.501	76	0.020	-	pCi/g
CZ47-014	*750830.315*	*2087846.11*	*0.5*	*1.0*	*Plutonium-239/240*	*31.356*	*50*	*0.020*	-	*pCi/g*
CZ47-014	*750830.315*	*2087846.11*	*0.5*	*1.0*	*Uranium-234*	*6.568*	*300*	*2.640*	-	*pCi/g*
CZ47-014	750830.315	2087846.11	0.5	1.0	Uranium-235	0.340	8	0.120	-	pCi/g
CZ47-014	750830.315	2087846.11	0.5	1.0	Uranium-238	6.568	351	1.490	-	pCi/g
CZ47-015	*750779.137*	*2087859.049*	*0.0*	*0.5*	*Uranium-234*	*5.212*	*300*	*2.253*	-	*pCi/g*
CZ47-015	750779.137	2087859.049	0.0	0.5	Uranium-235	0.165	8	0.094	-	pCi/g
CZ47-015	750779.137	2087859.049	0.0	0.5	Uranium-238	5.212	351	2.000	-	pCi/g
CZ47-015	*750779.137*	*2087859.049*	*0.5*	*1.0*	*Uranium-234*	*4.225*	*300*	*2.640*	-	*pCi/g*
CZ47-015	750779.137	2087859.049	0.5	1.0	Uranium-235	0.289	8	0.120	-	pCi/g
CZ47-015	750779.137	2087859.049	0.5	1.0	Uranium-238	4.225	351	1.490	-	pCi/g
CZ47-016	750837.001	2087784.626	0.0	0.5	Americium-241	0.339	76	0.023	-	pCi/g
CZ47-016	*750837.001*	*2087784.626*	*0.0*	*0.5*	*Plutonium-239/240*	*1.930*	*50*	*0.066*	-	*pCi/g*
CZ47-016	750837.001	2087784.626	0.0	0.5	Uranium-235	0.135	8	0.094	-	pCi/g
CZ47-016	*750837.001*	*2087784.626*	*1.0*	*1.5*	*Uranium-234*	*5.085*	*300*	*2.640*	-	*pCi/g*
CZ47-016	750837.001	2087784.626	1.0	1.5	Uranium-235	0.281	8	0.120	-	pCi/g
CZ47-016	750837.001	2087784.626	1.0	1.5	Uranium-238	5.085	351	1.490	-	pCi/g
Confirmation and In-Process Sampling Locations										
CU45-014	750460.025	2086920.509	1.0	1.5	Americium-241	6.370	76	0.020	-	pCi/g
CU45-014	*750460.025*	*2086920.509*	*1.0*	*1.5*	*Plutonium-239/240*	*36.309*	*50*	*0.020*	-	*pCi/g*
CU45-014	*750460.025*	*2086920.509*	*1.0*	*1.5*	*Uranium-234*	*2.889*	*300*	*2.640*	-	*pCi/g*
CU45-014	750460.025	2086920.509	1.0	1.5	Uranium-235	0.137	8	0.120	-	pCi/g
CU45-014	750460.025	2086920.509	1.0	1.5	Uranium-238	2.889	351	1.490	-	pCi/g
CU45-015	750441.959	2086891.004	1.0	1.5	Americium-241	2.622	76	0.020	-	pCi/g
CU45-015	*750441.959*	*2086891.004*	*1.0*	*1.5*	*Plutonium-239/240*	*14.945*	*50*	*0.020*	-	*pCi/g*
CU45-015	*750441.959*	*2086891.004*	*1.0*	*1.5*	*Uranium-234*	*2.997*	*300*	*2.640*	-	*pCi/g*
CU45-015	750441.959	2086891.004	1.0	1.5	Uranium-235	0.155	8	0.120	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CU45-015	750441.959	2086891.004	1.0	1.5	Uranium-238	2.997	351	1.490	-	pCi/g
CU45-016	750450.998	2086942.792	2.1	2.6	Americium-241	5.306	76	0.020	-	pCi/g
CU45-016	*750450.998*	*2086942.792*	*2.1*	*2.6*	*Plutonium-239/240*	*30.244*	*50*	*0.020*	-	*pCi/g*
CU45-016	*750450.998*	*2086942.792*	*2.1*	*2.6*	*Uranium-234*	*3.427*	*300*	*2.640*	-	*pCi/g*
CU45-016	750450.998	2086942.792	2.1	2.6	Uranium-238	3.427	351	1.490	-	pCi/g
CU45-017	750430.652	2086955.99	10.2	10.7	Americium-241	2.677	76	0.020	-	pCi/g
CU45-017	*750430.652*	*2086955.99*	*10.2*	*10.7*	*Plutonium-239/240*	*15.259*	*50*	*0.020*	-	*pCi/g*
CU45-017	750430.652	2086955.99	10.2	10.7	Uranium-235	0.171	8	0.120	-	pCi/g
CU45-017	750430.652	2086955.99	10.2	10.7	Uranium-238	2.457	351	1.490	-	pCi/g
CU45-018	750375.549	2086911.271	1.0	1.5	Uranium-235	0.253	8	0.120	-	pCi/g
CU45-018	750375.549	2086911.271	1.0	1.5	Uranium-238	1.514	351	1.490	-	pCi/g
CV45-000	750467.327	2087055.688	1.1	1.6	Acetone	35.000	102000000	-	5.000	ug/kg
CV45-000	750467.327	2087055.688	1.1	1.6	Methylene chloride	2.600	2530000	-	0.880	ug/kg
CV45-000	750467.327	2087055.688	1.1	1.6	Naphthalene	1.000	3090000	-	0.940	ug/kg
CV45-000	750467.327	2087055.688	1.1	1.6	Uranium-238	1.610	351	1.490	-	pCi/g
CV45-001	750455.254	2087021.669	2.4	2.9	Americium-241	2.673	76	0.020	-	pCi/g
CV45-001	*750455.254*	*2087021.669*	*2.4*	*2.9*	*Plutonium-239/240*	*15.236*	*50*	*0.020*	-	*pCi/g*
CV45-001	750455.254	2087021.669	2.4	2.9	Uranium-235	0.201	8	0.120	-	pCi/g
CV45-001	750455.254	2087021.669	2.4	2.9	Uranium-238	1.639	351	1.490	-	pCi/g
CV45-002	750443.064	2086987.953	7.4	7.9	Acetone	27.000	102000000	-	5.400	ug/kg
CV45-002	750443.064	2086987.953	7.4	7.9	Methylene chloride	2.600	2530000	-	0.950	ug/kg
CV45-003	750526.965	2087129.965	5.5	6.0	Americium-241	1.011	76	0.020	-	pCi/g
CV45-003	*750526.965*	*2087129.965*	*5.5*	*6.0*	*Plutonium-239/240*	*5.763*	*50*	*0.020*	-	*pCi/g*
CV45-003	750526.965	2087129.965	5.5	6.0	Uranium-235	0.137	8	0.120	-	pCi/g
CV45-003	750526.965	2087129.965	5.5	6.0	Uranium-238	2.206	351	1.490	-	pCi/g
CV45-004	750514.846	2087096.101	8.9	9.4	Americium-241	1.120	76	0.020	-	pCi/g
CV45-004	750514.846	2087096.101	8.9	9.4	Aroclor-1254	80.000	12400	-	7.700	ug/kg
CV45-004	750514.846	2087096.101	8.9	9.4	Barium	410.000	26400	289.380	-	mg/kg
CV45-004	750514.846	2087096.101	8.9	9.4	Benzoic Acid	330.000	1E+09	-	330.000	ug/kg
CV45-004	750514.846	2087096.101	8.9	9.4	bis(2-Ethylhexyl)phthalate	200.000	1970000	-	82.000	ug/kg
CV45-004	750514.846	2087096.101	8.9	9.4	Methylene chloride	1.300	2530000	-	0.930	ug/kg

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-004	750514.846	2087096.101	8.9	9.4	Naphthalene	1.100	3090000	-	1.000	ug/kg
CV45-004	750514.846	2087096.101	8.9	9.4	Plutonium-239/240	2.620	50	0.020	-	pCi/g
CV45-004	750514.846	2087096.101	8.9	9.4	Uranium-235	0.147	8	0.120	-	pCi/g
CV45-005	750502.704	2087062.131	8.9	9.4	Americium-241	3.850	76	0.020	-	pCi/g
CV45-005	*750502.704*	*2087062.131*	*8.9*	*9.4*	*Plutonium-239/240*	*21.945*	*50*	*0.020*	-	*pCi/g*
CV45-005	750502.704	2087062.131	8.9	9.4	Uranium-238	1.664	351	1.490	-	pCi/g
CV45-006	750490.609	2087028.249	10.2	10.7	Americium-241	0.541	76	0.020	-	pCi/g
CV45-006	*750490.609*	*2087028.249*	*10.2*	*10.7*	*Plutonium-239/240*	*3.081*	*50*	*0.020*	-	*pCi/g*
CV45-006	750490.609	2087028.249	10.2	10.7	Uranium-235	0.224	8	0.120	-	pCi/g
CV45-007	750478.474	2086994.383	8.9	9.4	2-Butanone	10.000	192000000	-	5.900	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Acetone	68.000	102000000	-	5.700	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Americium-241	7.090	76	0.020	-	pCi/g
CV45-007	750478.474	2086994.383	8.9	9.4	Aroclor-1016	37.000	46400	-	5.600	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Aroclor-1254	180.000	12400	-	8.300	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Benzo(a)anthracene	55.000	34900	-	30.000	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Benzo(a)pyrene	63.000	3490	-	49.000	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Benzo(b)fluoranthene	97.000	34900	-	35.000	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	bis(2-Ethylhexyl)phthalate	4800.000	1970000	-	87.000	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Carbon Disulfide	1.700	15100000	-	1.100	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Chrysene	80.000	3490000	-	34.000	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Fluoranthene	170.000	27200000	-	27.000	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Methylene chloride	3.200	2530000	-	1.000	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Naphthalene	2.500	3090000	-	1.100	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Phenol	46.000	613000000	-	42.000	ug/kg
CV45-007	750478.474	2086994.383	8.9	9.4	Plutonium-239/240	15.800	50	0.020	-	pCi/g
CV45-007	750478.474	2086994.383	8.9	9.4	Uranium-238	2.740	351	1.490	-	pCi/g
CV45-008	750550.286	2087102.522	14.6	15.1	Uranium-235	0.305	8	0.120	-	pCi/g
CV45-008	750550.286	2087102.522	14.6	15.1	Uranium-238	2.277	351	1.490	-	pCi/g
CV45-009	750538.151	2087068.635	13.4	13.9	Diethylphthalate	160.000	590000000	-	34.000	ug/kg
CV45-009	750538.151	2087068.635	13.4	13.9	Methylene chloride	2.100	2530000	-	0.920	ug/kg
CV45-010	750526.031	2087034.722	5.4	5.9	Uranium-235	0.156	8	0.120	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-010	750526.031	2087034.722	5.4	5.9	Uranium-238	1.973	351	1.490	-	pCi/g
CV45-011	750396.17	2086853.802	4.0	4.5	Americium-241	0.145	76	0.020	-	pCi/g
CV45-011	750396.17	2086853.802	4.0	4.5	Plutonium-239/240	0.536	50	0.020	-	pCi/g
CV45-012	750377.998	2086825.646	1.0	1.5	Americium-241	0.613	76	0.020	-	pCi/g
CV45-012	*750377.998*	*2086825.646*	*1.0*	*1.5*	*Plutonium-239/240*	*3.496*	*50*	*0.020*	-	*pCi/g*
CV45-012	750377.998	2086825.646	1.0	1.5	Uranium-235	0.249	8	0.120	-	pCi/g
CV45-012	750377.998	2086825.646	1.0	1.5	Uranium-238	1.808	351	1.490	-	pCi/g
CV45-013	750407.892	2086831.831	1.0	1.5	Americium-241	2.822	76	0.020	-	pCi/g
CV45-013	*750407.892*	*2086831.831*	*1.0*	*1.5*	*Plutonium-239/240*	*16.085*	*50*	*0.020*	-	*pCi/g*
CV45-013	750407.892	2086831.831	1.0	1.5	Uranium-235	0.152	8	0.120	-	pCi/g
CV45-014	750553.869	2087121.509	7.3	7.8	Americium-241	0.415	76	0.020	-	pCi/g
CV45-014	*750553.869*	*2087121.509*	*7.3*	*7.8*	*Plutonium-239/240*	*2.368*	*50*	*0.020*	-	*pCi/g*
CV45-014	750553.869	2087121.509	7.3	7.8	Uranium-235	0.292	8	0.120	-	pCi/g
CV45-014	750553.869	2087121.509	7.3	7.8	Uranium-238	1.715	351	1.490	-	pCi/g
CV45-015	750359.175	2086842.93	1.0	1.5	Americium-241	6.295	76	0.020	-	pCi/g
CV45-015	*750359.175*	*2086842.93*	*1.0*	*1.5*	*Plutonium-239/240*	*35.882*	*50*	*0.020*	-	*pCi/g*
CV45-015	*750359.175*	*2086842.93*	*1.0*	*1.5*	*Uranium-234*	*5.083*	*300*	*2.640*	-	*pCi/g*
CV45-015	750359.175	2086842.93	1.0	1.5	Uranium-235	0.303	8	0.120	-	pCi/g
CV45-015	750359.175	2086842.93	1.0	1.5	Uranium-238	5.083	351	1.490	-	pCi/g
CV45-016	750365.95	2086864.903	4.7	5.2	Americium-241	0.855	76	0.020	-	pCi/g
CV45-016	*750365.95*	*2086864.903*	*4.7*	*5.2*	*Plutonium-239/240*	*4.872*	*50*	*0.020*	-	*pCi/g*
CV45-016	*750365.95*	*2086864.903*	*4.7*	*5.2*	*Uranium-234*	*3.688*	*300*	*2.640*	-	*pCi/g*
CV45-016	750365.95	2086864.903	4.7	5.2	Uranium-235	0.274	8	0.120	-	pCi/g
CV45-016	750365.95	2086864.903	4.7	5.2	Uranium-238	3.688	351	1.490	-	pCi/g
CV45-017	750388.003	2086889.576	5.1	5.6	Uranium-235	0.157	8	0.120	-	pCi/g
CV45-044	750495.006	2086961.481	1.0	1.5	Americium-241	8.925	76	0.020	-	pCi/g
CV45-044	***750495.006***	***2086961.481***	***1.0***	***1.5***	***Plutonium-239/240***	***50.873***	***50***	***0.020***	-	***pCi/g***
CV45-044	750495.006	2086961.481	1.0	1.5	Uranium-235	0.158	8	0.120	-	pCi/g
CV45-044	750495.006	2086961.481	1.0	1.5	Uranium-238	2.357	351	1.490	-	pCi/g
CV45-044	*750495.006*	*2086961.481*	*1.7*	*2.2*	*Uranium-234*	*4.680*	*300*	*2.640*	-	*pCi/g*
CV45-044	750495.006	2086961.481	1.7	2.2	Uranium-235	0.273	8	0.120	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-044	750495.006	2086961.481	1.7	2.2	Uranium-238	4.680	351	1.490	-	pCi/g
CV45-045	*750463.906*	*2086962.778*	*1.0*	*1.5*	*Uranium-234*	*2.796*	*300*	*2.640*	-	*pCi/g*
CV45-045	750463.906	2086962.778	1.0	1.5	Uranium-235	0.231	8	0.120	-	pCi/g
CV45-045	750463.906	2086962.778	1.0	1.5	Uranium-238	2.796	351	1.490	-	pCi/g
CV45-046	750504.669	2087001.213	5.8	6.3	Uranium-235	0.151	8	0.120	-	pCi/g
CV45-046	750504.669	2087001.213	5.8	6.3	Uranium-238	2.343	351	1.490	-	pCi/g
CV45-047	750490.21	2087103.334	1.5	2.0	Americium-241	0.591	76	0.020	-	pCi/g
CV45-047	*750490.21*	*2087103.334*	*1.5*	*2.0*	*Plutonium-239/240*	*3.369*	*50*	*0.020*	-	*pCi/g*
CV45-047	*750490.21*	*2087103.334*	*1.5*	*2.0*	*Uranium-234*	*4.890*	*300*	*2.640*	-	*pCi/g*
CV45-047	750490.21	2087103.334	1.5	2.0	Uranium-235	0.307	8	0.120	-	pCi/g
CV45-047	750490.21	2087103.334	1.5	2.0	Uranium-238	4.890	351	1.490	-	pCi/g
CV45-048	*750481.216*	*2087079.151*	*5.7*	*6.2*	*Uranium-234*	*5.116*	*300*	*2.640*	-	*pCi/g*
CV45-048	750481.216	2087079.151	5.7	6.2	Uranium-235	0.354	8	0.120	-	pCi/g
CV45-048	750481.216	2087079.151	5.7	6.2	Uranium-238	5.116	351	1.490	-	pCi/g
CV45-049	750455.246	2087044.312	1.0	1.5	Uranium-235	0.179	8	0.120	-	pCi/g
CV45-050	750434.291	2087006.871	1.0	1.5	Uranium-235	0.181	8	0.120	-	pCi/g
CV45-050	750434.291	2087006.871	1.0	1.5	Uranium-238	2.566	351	1.490	-	pCi/g
CV45-051	750409.081	2086927.654	8.2	8.7	Americium-241	0.590	76	0.020	-	pCi/g
CV45-051	750409.081	2086927.654	8.2	8.7	Aroclor-1254	9.200	12400	-	7.800	ug/kg
CV45-051	750409.081	2086927.654	8.2	8.7	Methylene chloride	3.200	2530000	-	0.950	ug/kg
CV45-051	750409.081	2086927.654	8.2	8.7	Plutonium-239/240	0.382	50	0.020	-	pCi/g
CV45-051	750409.081	2086927.654	8.2	8.7	Uranium-238	2.150	351	1.490	-	pCi/g
CV45-052	750576.292	2087034.419	1.0	1.5	Americium-241	1.632	76	0.020	-	pCi/g
CV45-052	*750576.292*	*2087034.419*	*1.0*	*1.5*	*Plutonium-239/240*	*9.302*	*50*	*0.020*	-	*pCi/g*
CV45-052	750576.292	2087034.419	1.0	1.5	Uranium-235	0.157	8	0.120	-	pCi/g
CV45-052	750576.292	2087034.419	1.0	1.5	Uranium-238	1.679	351	1.490	-	pCi/g
CV45-053	750382.365	2086944.971	1.0	1.5	Uranium-235	0.214	8	0.120	-	pCi/g
CV45-053	750382.365	2086944.971	1.0	1.5	Uranium-238	1.931	351	1.490	-	pCi/g
CV45-054	750403.399	2086976.729	1.5	2.0	Americium-241	0.356	76	0.020	-	pCi/g
CV45-054	*750403.399*	*2086976.729*	*1.5*	*2.0*	*Plutonium-239/240*	*2.030*	*50*	*0.020*	-	*pCi/g*
CV45-054	750403.399	2086976.729	1.5	2.0	Uranium-235	0.224	8	0.120	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV45-055	750434.64	2086919.85	1.6	2.1	Americium-241	0.819	76	0.020	-	pCi/g
CV45-055	*750434.64*	*2086919.85*	*1.6*	*2.1*	*Plutonium-239/240*	*4.669*	*50*	*0.020*	-	*pCi/g*
CV45-055	750434.64	2086919.85	1.6	2.1	Uranium-235	0.141	8	0.120	-	pCi/g
CV45-056	750569.183	2087115.822	18.9	19.4	Americium-241	7.510	76	0.020	-	pCi/g
CV45-056	750569.183	2087115.822	18.9	19.4	Plutonium-239/240	16.100	50	0.020	-	pCi/g
CV45-056	750569.183	2087115.822	18.9	19.4	Uranium-238	2.930	351	1.490	-	pCi/g
CV45-056	750569.183	2087115.822	19.4	19.9	Americium-241	0.878	76	0.020	-	pCi/g
CV45-056	750569.183	2087115.822	19.4	19.9	Plutonium-239/240	1.350	50	0.020	-	pCi/g
CV45-057	750519.622	2086983.073	1.0	1.5	Americium-241	5.145	76	0.020	-	pCi/g
CV45-057	*750519.622*	*2086983.073*	*1.0*	*1.5*	*Plutonium-239/240*	*29.327*	*50*	*0.020*	-	*pCi/g*
CV45-057	750519.622	2086983.073	1.0	1.5	Uranium-238	2.393	351	1.490	-	pCi/g
CV46-002	750573.585	2087075.047	8.3	8.8	Acetone	9.900	102000000	-	5.400	ug/kg
CV46-002	750573.585	2087075.047	8.3	8.8	Americium-241	0.522	76	0.020	-	pCi/g
CV46-002	750573.585	2087075.047	8.3	8.8	bis(2-Ethylhexyl)phthalate	150.000	1970000	-	81.000	ug/kg
CV46-002	750573.585	2087075.047	8.3	8.8	Diethylphthalate	150.000	590000000	-	35.000	ug/kg
CV46-002	750573.585	2087075.047	8.3	8.8	Methylene chloride	1.800	2530000	-	0.930	ug/kg
CV46-002	750573.585	2087075.047	8.3	8.8	Plutonium-239/240	1.050	50	0.020	-	pCi/g
CV46-003	750425.889	2086861.081	1.0	1.5	Americium-241	1.042	76	0.020	-	pCi/g
CV46-003	*750425.889*	*2086861.081*	*1.0*	*1.5*	*Plutonium-239/240*	*5.939*	*50*	*0.020*	-	*pCi/g*
CV46-003	*750425.889*	*2086861.081*	*1.0*	*1.5*	*Uranium-234*	*2.702*	*300*	*2.640*	-	*pCi/g*
CV46-003	750425.889	2086861.081	1.0	1.5	Uranium-238	2.702	351	1.490	-	pCi/g
CV46-004	750583.315	2087103.753	5.9	6.4	Americium-241	9.411	76	0.020	-	pCi/g
CV46-004	***750583.315***	***2087103.753***	***5.9***	***6.4***	***Plutonium-239/240***	***53.643***	***50***	***0.020***	-	***pCi/g***
CV46-004	*750583.315*	*2087103.753*	*5.9*	*6.4*	*Uranium-234*	*2.826*	*300*	*2.640*	-	*pCi/g*
CV46-004	750583.315	2087103.753	5.9	6.4	Uranium-235	0.196	8	0.120	-	pCi/g
CV46-004	750583.315	2087103.753	5.9	6.4	Uranium-238	2.826	351	1.490	-	pCi/g
CV46-004	750583.315	2087103.753	9.6	10.1	Americium-241	2.646	76	0.020	-	pCi/g
CV46-004	*750583.315*	*2087103.753*	*9.6*	*10.1*	*Plutonium-239/240*	*15.082*	*50*	*0.020*	-	*pCi/g*
CV46-004	*750583.315*	*2087103.753*	*9.6*	*10.1*	*Uranium-234*	*4.193*	*300*	*2.640*	-	*pCi/g*
CV46-004	750583.315	2087103.753	9.6	10.1	Uranium-235	0.286	8	0.120	-	pCi/g
CV46-004	750583.315	2087103.753	9.6	10.1	Uranium-238	4.193	351	1.490	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CV46-005	750416.71	2086887.834	1.4	1.9	Americium-241	4.530	76	0.020	-	pCi/g
CV46-005	*750416.71*	*2086887.834*	*1.4*	*1.9*	*Plutonium-239/240*	*25.821*	*50*	*0.020*	-	*pCi/g*
CV46-005	*750416.71*	*2086887.834*	*1.4*	*1.9*	*Uranium-234*	*5.165*	*300*	*2.640*	-	*pCi/g*
CV46-005	750416.71	2086887.834	1.4	1.9	Uranium-235	0.368	8	0.120	-	pCi/g
CV46-005	750416.71	2086887.834	1.4	1.9	Uranium-238	5.165	351	1.490	-	pCi/g
CV46-008	750546.181	2087029.621	5.0	5.5	Uranium-235	0.180	8	0.120	-	pCi/g
CV46-008	750546.181	2087029.621	5.0	5.5	Uranium-238	2.281	351	1.490	-	pCi/g
CV46-009	750601.528	2087062.358	1.0	1.5	Americium-241	8.416	76	0.020	-	pCi/g
CV46-009	*750601.528*	*2087062.358*	*1.0*	*1.5*	*Plutonium-239/240*	*47.971*	*50*	*0.020*	-	*pCi/g*
CV46-009	*750601.528*	*2087062.358*	*1.0*	*1.5*	*Uranium-234*	*2.927*	*300*	*2.640*	-	*pCi/g*
CV46-009	750601.528	2087062.358	1.0	1.5	Uranium-235	0.227	8	0.120	-	pCi/g
CV46-009	750601.528	2087062.358	1.0	1.5	Uranium-238	2.927	351	1.490	-	pCi/g
CV46-010	750572.994	2087049.9	3.6	4.1	Plutonium-239/240	0.052	50	0.020	-	pCi/g
CV46-010	750572.994	2087049.9	3.6	4.1	Uranium-238	1.890	351	1.490	-	pCi/g
CV46-011	750569.183	2087123.861	3.9	4.4	Uranium-235	0.166	8	0.120	-	pCi/g
CV46-012	750597.904	2087105.556	1.3	1.8	Americium-241	0.710	76	0.020	-	pCi/g
CV46-012	750597.904	2087105.556	1.3	1.8	Plutonium-239/240	1.410	50	0.020	-	pCi/g
CV46-013	750547.666	2087010.763	1.0	1.5	Americium-241	2.944	76	0.020	-	pCi/g
CV46-013	*750547.666*	*2087010.763*	*1.0*	*1.5*	*Plutonium-239/240*	*16.781*	*50*	*0.020*	-	*pCi/g*
CV46-013	750547.666	2087010.763	1.0	1.5	Uranium-238	2.003	351	1.490	-	pCi/g
CV46-014	750589.399	2087076.353	1.2	1.7	Americium-241	3.180	76	0.020	-	pCi/g
CV46-014	750589.399	2087076.353	1.2	1.7	Plutonium-239/240	5.800	50	0.020	-	pCi/g
CV46-015	750619.409	2087081.679	1.0	1.5	Americium-241	1.210	76	0.020	-	pCi/g
CV46-015	750619.409	2087081.679	1.0	1.5	Plutonium-239/240	2.290	50	0.020	-	pCi/g
CW45-000	750534.367	2087140.064	1.0	1.5	Americium-241	4.202	76	0.020	-	pCi/g
CW45-000	*750534.367*	*2087140.064*	*1.0*	*1.5*	*Plutonium-239/240*	*23.951*	*50*	*0.020*	-	*pCi/g*
CW45-000	750534.367	2087140.064	1.0	1.5	Uranium-235	0.128	8	0.120	-	pCi/g
CW45-001	750549.992	2087129.711	1.0	1.5	Plutonium-239/240	0.599	50	0.020	-	pCi/g
CW45-006	750506.788	2087133.399	4.4	4.9	Americium-241	0.513	76	0.020	-	pCi/g
CW45-006	*750506.788*	*2087133.399*	*4.4*	*4.9*	*Plutonium-239/240*	*2.926*	*50*	*0.020*	-	*pCi/g*
CW45-006	750506.788	2087133.399	4.4	4.9	Uranium-238	2.173	351	1.490	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CW46-002	750622.962	2087305.894	8.2	8.7	Americium-241	0.615	76	0.020	-	pCi/g
CW46-002	750622.962	2087305.894	8.2	8.7	Plutonium-239/240	1.320	50	0.020	-	pCi/g
CW46-002	750622.962	2087305.894	8.2	8.7	Uranium-238	2.180	351	1.490	-	pCi/g
CW46-003	750658.306	2087312.363	8.6	9.1	Americium-241	4.276	76	0.020	-	pCi/g
CW46-003	*750658.306*	*2087312.363*	*8.6*	*9.1*	*Plutonium-239/240*	*24.373*	*50*	*0.020*	-	*pCi/g*
CW46-003	750658.306	2087312.363	8.6	9.1	Uranium-235	0.253	8	0.120	-	pCi/g
CW46-003	750658.306	2087312.363	8.6	9.1	Uranium-238	1.970	351	1.490	-	pCi/g
CW46-004	750646.216	2087278.513	10.3	10.8	Americium-241	3.504	76	0.020	-	pCi/g
CW46-004	*750646.216*	*2087278.513*	*10.3*	*10.8*	*Plutonium-239/240*	*19.973*	*50*	*0.020*	-	*pCi/g*
CW46-004	750646.216	2087278.513	10.3	10.8	Uranium-235	0.134	8	0.120	-	pCi/g
CW46-004	750646.216	2087278.513	10.3	10.8	Uranium-238	1.956	351	1.490	-	pCi/g
CW46-005	750634.147	2087244.588	10.7	11.2	Americium-241	0.574	76	0.020	-	pCi/g
CW46-005	*750634.147*	*2087244.588*	*10.7*	*11.2*	*Plutonium-239/240*	*3.269*	*50*	*0.020*	-	*pCi/g*
CW46-005	750634.147	2087244.588	10.7	11.2	Uranium-235	0.197	8	0.120	-	pCi/g
CW46-006	750622.005	2087210.684	4.3	4.8	Acetone	5.400	102000000	-	1.700	ug/kg
CW46-006	750622.005	2087210.684	4.3	4.8	Carbon Tetrachloride	0.550	81500	-	0.190	ug/kg
CW46-006	750622.005	2087210.684	4.3	4.8	Chloroform	0.250	19200	-	0.096	ug/kg
CW46-006	750622.005	2087210.684	4.3	4.8	Methylene chloride	4.600	2530000	-	0.370	ug/kg
CW46-006	750622.005	2087210.684	4.3	4.8	Plutonium-239/240	0.503	50	0.020	-	pCi/g
CW46-006	750622.005	2087210.684	4.3	4.8	Tetrachloroethene	4.600	615000	-	0.200	ug/kg
CW46-006	750622.005	2087210.684	4.3	4.8	Trichloroethene	1.200	19600	-	0.160	ug/kg
CW46-007	750669.488	2087251.033	6.5	7.0	Uranium-235	0.123	8	0.120	-	pCi/g
CW46-008	750657.424	2087217.18	7.0	7.5	Americium-241	4.131	76	0.020	-	pCi/g
CW46-008	*750657.424*	*2087217.18*	*7.0*	*7.5*	*Plutonium-239/240*	*23.547*	*50*	*0.020*	-	*pCi/g*
CW46-008	750657.424	2087217.18	7.0	7.5	Uranium-235	0.195	8	0.120	-	pCi/g
CW46-008	750657.424	2087217.18	7.0	7.5	Uranium-238	1.807	351	1.490	-	pCi/g
CW46-009	750604.56	2087230.049	2.4	2.9	Uranium-235	0.177	8	0.120	-	pCi/g
CW46-009	750604.56	2087230.049	2.4	2.9	Uranium-238	2.525	351	1.490	-	pCi/g
CW46-010	*750653.12*	*2087189.268*	*1.0*	*1.5*	*Uranium-234*	*3.952*	*300*	*2.640*	-	*pCi/g*
CW46-010	750653.12	2087189.268	1.0	1.5	Uranium-235	0.243	8	0.120	-	pCi/g
CW46-010	750653.12	2087189.268	1.0	1.5	Uranium-238	3.952	351	1.490	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CW46-011	750757.359	2087484.989	1.0	1.5	Americium-241	0.232	76	0.020	-	pCi/g
CW46-011	*750757.359*	*2087484.989*	*1.0*	*1.5*	*Plutonium-239/240*	*1.320*	*50*	*0.020*	-	*pCi/g*
CW46-012	750744.659	2087492.406	0.2	0.7	Americium-241	3.486	76	0.020	-	pCi/g
CW46-012	*750744.659*	*2087492.406*	*0.2*	*0.7*	*Plutonium-239/240*	*19.870*	*50*	*0.020*	-	*pCi/g*
CW46-012	750744.659	2087492.406	0.2	0.7	Uranium-235	0.247	8	0.120	-	pCi/g
CW46-012	750744.659	2087492.406	0.2	0.7	Uranium-238	1.712	351	1.490	-	pCi/g
CW46-013	750703.141	2087152.65	1.0	1.5	Americium-241	5.215	76	0.020	-	pCi/g
CW46-013	*750703.141*	*2087152.65*	*1.0*	*1.5*	*Plutonium-239/240*	*29.726*	*50*	*0.020*	-	*pCi/g*
CW46-013	750703.141	2087152.65	1.0	1.5	Uranium-235	0.185	8	0.120	-	pCi/g
CW46-013	750703.141	2087152.65	1.0	1.5	Uranium-238	1.750	351	1.490	-	pCi/g
CW46-014	750735.7	2087451.97	1.0	1.5	Americium-241	6.627	76	0.020	-	pCi/g
CW46-014	*750735.7*	*2087451.97*	*1.0*	*1.5*	*Plutonium-239/240*	*37.774*	*50*	*0.020*	-	*pCi/g*
CW46-014	750735.7	2087451.97	1.0	1.5	Uranium-235	0.190	8	0.120	-	pCi/g
CW46-014	750735.7	2087451.97	1.0	1.5	Uranium-238	1.795	351	1.490	-	pCi/g
CW46-015	750599.921	2087303.045	1.0	1.5	Americium-241	4.174	76	0.020	-	pCi/g
CW46-015	*750599.921*	*2087303.045*	*1.0*	*1.5*	*Plutonium-239/240*	*23.792*	*50*	*0.020*	-	*pCi/g*
CW46-015	*750599.921*	*2087303.045*	*1.0*	*1.5*	*Uranium-234*	*4.785*	*300*	*2.640*	-	*pCi/g*
CW46-015	750599.921	2087303.045	1.0	1.5	Uranium-235	0.350	8	0.120	-	pCi/g
CW46-015	750599.921	2087303.045	1.0	1.5	Uranium-238	4.785	351	1.490	-	pCi/g
CW46-016	750612.46	2087263.262	1.0	1.5	Americium-241	0.175	76	0.020	-	pCi/g
CW46-016	750612.46	2087263.262	1.0	1.5	Plutonium-239/240	0.323	50	0.020	-	pCi/g
CW46-016	750612.46	2087263.262	1.0	1.5	Uranium-238	2.220	351	1.490	-	pCi/g
CW46-022	750676.062	2087223.512	6.5	7.0	Americium-241	3.410	76	0.020	-	pCi/g
CW46-022	750676.062	2087223.512	6.5	7.0	Plutonium-239/240	7.400	50	0.020	-	pCi/g
CW46-022	750676.062	2087223.512	6.5	7.0	Uranium-238	1.540	351	1.490	-	pCi/g
CW46-023	*750684.052*	*2087196.775*	*1.0*	*1.5*	*Uranium-234*	*3.449*	*300*	*2.640*	-	*pCi/g*
CW46-023	750684.052	2087196.775	1.0	1.5	Uranium-235	0.246	8	0.120	-	pCi/g
CW46-023	750684.052	2087196.775	1.0	1.5	Uranium-238	3.449	351	1.490	-	pCi/g
CW46-024	750713.268	2087208.455	1.0	1.5	Americium-241	3.892	76	0.020	-	pCi/g
CW46-024	*750713.268*	*2087208.455*	*1.0*	*1.5*	*Plutonium-239/240*	*22.184*	*50*	*0.020*	-	*pCi/g*
CW46-024	750713.268	2087208.455	1.0	1.5	Uranium-235	0.210	8	0.120	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CW46-024	750713.268	2087208.455	1.0	1.5	Uranium-238	1.797	351	1.490	-	pCi/g
CW46-025	750706.938	2087245.919	1.0	1.5	Americium-241	4.955	76	0.020	-	pCi/g
CW46-025	*750706.938*	*2087245.919*	*1.0*	*1.5*	*Plutonium-239/240*	*28.244*	*50*	*0.020*	-	*pCi/g*
CW46-025	750706.938	2087245.919	1.0	1.5	Uranium-235	0.192	8	0.120	-	pCi/g
CW46-026	750694.721	2087276.247	1.0	1.5	Americium-241	13.300	76	0.020	-	pCi/g
CW46-026	**750694.721**	**2087276.247**	**1.0**	**1.5**	**Plutonium-239/240**	**79.700**	**50**	**0.020**	**-**	**pCi/g**
CW46-026	750694.721	2087276.247	1.0	1.5	Uranium-234	3.170	300	2.640	-	pCi/g
CW46-026	750694.721	2087276.247	1.0	1.5	Uranium-238	1.680	351	1.490	-	pCi/g
CW46-027	750635.879	2087250.778	10.5	11.0	Uranium-235	0.132	8	0.120	-	pCi/g
CW46-027	750635.879	2087250.778	10.5	11.0	Uranium-238	1.627	351	1.490	-	pCi/g
CW46-028	750636.828	2087279.727	11.9	12.4	Americium-241	5.753	76	0.020	-	pCi/g
CW46-028	*750636.828*	*2087279.727*	*11.9*	*12.4*	*Plutonium-239/240*	*32.792*	*50*	*0.020*	-	*pCi/g*
CW46-028	*750636.828*	*2087279.727*	*11.9*	*12.4*	*Uranium-234*	*3.514*	*300*	*2.640*	-	*pCi/g*
CW46-028	750636.828	2087279.727	11.9	12.4	Uranium-235	0.253	8	0.120	-	pCi/g
CW46-028	750636.828	2087279.727	11.9	12.4	Uranium-238	3.514	351	1.490	-	pCi/g
CW46-029	750640.232	2087314.369	11.9	12.4	Americium-241	3.249	76	0.020	-	pCi/g
CW46-029	*750640.232*	*2087314.369*	*11.9*	*12.4*	*Plutonium-239/240*	*18.519*	*50*	*0.020*	-	*pCi/g*
CW46-029	750640.232	2087314.369	11.9	12.4	Uranium-235	0.216	8	0.120	-	pCi/g
CW46-029	750640.232	2087314.369	11.9	12.4	Uranium-238	2.042	351	1.490	-	pCi/g
CX45-000	*750557.697*	*2087432.148*	*2.2*	*2.7*	*Uranium-234*	*3.176*	*300*	*2.640*	-	*pCi/g*
CX45-000	750557.697	2087432.148	2.2	2.7	Uranium-235	0.193	8	0.120	-	pCi/g
CX45-000	750557.697	2087432.148	2.2	2.7	Uranium-238	3.176	351	1.490	-	pCi/g
CX45-001	750586.317	2087338.823	1.2	1.7	Americium-241	0.746	76	0.020	-	pCi/g
CX45-001	*750586.317*	*2087338.823*	*1.2*	*1.7*	*Plutonium-239/240*	*4.249*	*50*	*0.020*	-	*pCi/g*
CX45-001	*750586.317*	*2087338.823*	*1.2*	*1.7*	*Uranium-234*	*3.513*	*300*	*2.640*	-	*pCi/g*
CX45-001	750586.317	2087338.823	1.2	1.7	Uranium-235	0.278	8	0.120	-	pCi/g
CX45-001	750586.317	2087338.823	1.2	1.7	Uranium-238	3.513	351	1.490	-	pCi/g
CX46-000	750589.357	2087489.933	5.1	5.6	Americium-241	8.529	76	0.020	-	pCi/g
CX46-000	*750589.357*	*2087489.933*	*5.1*	*5.6*	*Plutonium-239/240*	*48.615*	*50*	*0.020*	-	*pCi/g*
CX46-000	750589.357	2087489.933	5.1	5.6	Uranium-238	1.807	351	1.490	-	pCi/g
CX46-001	750577.184	2087456.054	5.1	5.6	Americium-241	2.576	76	0.020	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CX46-001	*750577.184*	*2087456.054*	*5.1*	*5.6*	*Plutonium-239/240*	*14.683*	*50*	*0.020*	-	*pCi/g*
CX46-001	750577.184	2087456.054	5.1	5.6	Uranium-235	0.133	8	0.120	-	pCi/g
CX46-001	750577.184	2087456.054	5.1	5.6	Uranium-238	1.859	351	1.490	-	pCi/g
CX46-002	*750624.709*	*2087496.406*	*9.2*	*9.7*	*Uranium-234*	*4.834*	*300*	*2.640*	-	*pCi/g*
CX46-002	750624.709	2087496.406	9.2	9.7	Uranium-235	0.237	8	0.120	-	pCi/g
CX46-002	750624.709	2087496.406	9.2	9.7	Uranium-238	4.834	351	1.490	-	pCi/g
CX46-003	750612.611	2087462.546	13.8	14.3	Plutonium-239/240	0.285	50	0.020	-	pCi/g
CX46-004	750602.417	2087424.018	14.8	15.3	Americium-241	3.109	76	0.020	-	pCi/g
CX46-004	*750602.417*	*2087424.018*	*14.8*	*15.3*	*Plutonium-239/240*	*17.721*	*50*	*0.020*	-	*pCi/g*
CX46-004	750602.417	2087424.018	14.8	15.3	Uranium-235	0.189	8	0.120	-	pCi/g
CX46-004	750602.417	2087424.018	14.8	15.3	Uranium-238	1.674	351	1.490	-	pCi/g
CX46-005	750588.408	2087394.733	11.5	12.0	Acetone	18.000	102000000	-	1.900	ug/kg
CX46-005	750588.408	2087394.733	11.5	12.0	Cadmium	2.400	962	1.700	-	mg/kg
CX46-005	750588.408	2087394.733	11.5	12.0	Carbon Tetrachloride	2.400	81500	-	0.220	ug/kg
CX46-005	750588.408	2087394.733	11.5	12.0	Chloroform	4.400	19200	-	0.110	ug/kg
CX46-005	750588.408	2087394.733	11.5	12.0	Tetrachloroethene	55.000	615000	-	0.230	ug/kg
CX46-005	750588.408	2087394.733	11.5	12.0	Trichloroethene	1100.000	19600	-	0.890	ug/kg
CX46-007	750648.023	2087468.948	17.5	18.0	Americium-241	2.936	76	0.020	-	pCi/g
CX46-007	*750648.023*	*2087468.948*	*17.5*	*18.0*	*Plutonium-239/240*	*16.735*	*50*	*0.020*	-	*pCi/g*
CX46-008	750635.927	2087435.084	18.3	18.8	Acetone	22.000	102000000	-	2.000	ug/kg
CX46-008	750635.927	2087435.084	18.3	18.8	Americium-241	0.783	76	0.020	-	pCi/g
CX46-008	750635.927	2087435.084	18.3	18.8	Aroclor-1254	360.000	12400	-	9.300	ug/kg
CX46-008	750635.927	2087435.084	18.3	18.8	bis(2-Ethylhexyl)phthalate	3600.000	1970000	-	44.000	ug/kg
CX46-008	750635.927	2087435.084	18.3	18.8	Carbon Disulfide	0.340	15100000	-	0.180	ug/kg
CX46-008	750635.927	2087435.084	18.3	18.8	Carbon Tetrachloride	1.400	81500	-	0.230	ug/kg
CX46-008	750635.927	2087435.084	18.3	18.8	Chloroform	1.400	19200	-	0.110	ug/kg
CX46-008	750635.927	2087435.084	18.3	18.8	Plutonium-239/240	2.430	50	0.020	-	pCi/g
CX46-008	750635.927	2087435.084	18.3	18.8	Tetrachloroethene	12.000	615000	-	0.240	ug/kg
CX46-008	750635.927	2087435.084	18.3	18.8	Trichloroethene	46.000	19600	-	0.180	ug/kg
CX46-009	750623.805	2087401.198	14.7	15.2	Americium-241	1.740	76	0.020	-	pCi/g
CX46-009	*750623.805*	*2087401.198*	*14.7*	*15.2*	*Plutonium-239/240*	*9.918*	*50*	*0.020*	-	*pCi/g*

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CX46-009	750623.805	2087401.198	14.7	15.2	Uranium-238	1.753	351	1.490	-	pCi/g
CX46-010	750611.717	2087367.242	15.6	16.1	Uranium-238	1.859	351	1.490	-	pCi/g
CX46-011	750683.484	2087475.457	16.8	17.3	Uranium-235	0.277	8	0.120	-	pCi/g
CX46-012	750671.351	2087441.546	15.0	15.5	Uranium-235	0.258	8	0.120	-	pCi/g
CX46-012	750671.351	2087441.546	15.0	15.5	Uranium-238	2.234	351	1.490	-	pCi/g
CX46-013	750659.286	2087407.643	13.0	13.5	Uranium-235	0.154	8	0.120	-	pCi/g
CX46-013	750659.286	2087407.643	13.0	13.5	Uranium-238	2.329	351	1.490	-	pCi/g
CX46-014	750647.138	2087373.704	12.8	13.3	Uranium-238	1.569	351	1.490	-	pCi/g
CX46-015	750635.051	2087339.798	12.3	12.8	Americium-241	5.385	76	0.020	-	pCi/g
CX46-015	*750635.051*	*2087339.798*	*12.3*	*12.8*	*Plutonium-239/240*	*30.695*	*50*	*0.020*	-	*pCi/g*
CX46-015	*750635.051*	*2087339.798*	*12.3*	*12.8*	*Uranium-234*	*2.970*	*300*	*2.640*	-	*pCi/g*
CX46-015	750635.051	2087339.798	12.3	12.8	Uranium-235	0.252	8	0.120	-	pCi/g
CX46-015	750635.051	2087339.798	12.3	12.8	Uranium-238	2.970	351	1.490	-	pCi/g
CX46-016	750670.434	2087346.337	6.7	7.2	1,2,4-Trichlorobenzene	1.000	9230000	-	0.310	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	2-Butanone	12.000	192000000	-	2.000	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Acetone	78.000	102000000	-	1.800	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Americium-241	2.770	76	0.020	-	pCi/g
CX46-016	750670.434	2087346.337	6.7	7.2	Aroclor-1254	320.000	12400	-	17.000	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Benzo(a)anthracene	84.000	34900	-	26.000	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	bis(2-Ethylhexyl)phthalate	490.000	1970000	-	41.000	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Carbon Disulfide	0.370	15100000	-	0.170	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Carbon Tetrachloride	0.330	81500	-	0.200	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Chrysene	79.000	3490000	-	35.000	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Methylene chloride	2.600	2530000	-	0.390	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Naphthalene	1.500	3090000	-	0.450	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Plutonium-239/240	6.150	50	0.020	-	pCi/g
CX46-016	750670.434	2087346.337	6.7	7.2	Tetrachloroethene	4.700	615000	-	0.220	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Toluene	0.350	31300000	-	0.100	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Trichloroethene	0.880	19600	-	0.170	ug/kg
CX46-016	750670.434	2087346.337	6.7	7.2	Uranium-238	2.020	351	1.490	-	pCi/g
CX46-017	750700.203	2087401.261	1.0	1.5	Americium-241	0.491	76	0.020	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CX46-017	*750700.203*	*2087401.261*	*1.0*	*1.5*	*Plutonium-239/240*	*2.801*	*50*	*0.020*	-	*pCi/g*
CX46-018	750705.58	2087438.815	1.6	2.1	Uranium-235	0.175	8	0.120	-	pCi/g
CX46-019	750714.012	2087475.954	9.8	10.3	Uranium-238	1.880	351	1.490	-	pCi/g
CX46-021	*750628.033*	*2087518.859*	*1.6*	*2.1*	*Uranium-234*	*3.099*	*300*	*2.640*	-	*pCi/g*
CX46-021	750628.033	2087518.859	1.6	2.1	Uranium-235	0.193	8	0.120	-	pCi/g
CX46-021	750628.033	2087518.859	1.6	2.1	Uranium-238	3.099	351	1.490	-	pCi/g
CX46-022	750602.497	2087516.258	1.0	1.5	Americium-241	2.169	76	0.020	-	pCi/g
CX46-022	*750602.497*	*2087516.258*	*1.0*	*1.5*	*Plutonium-239/240*	*12.363*	*50*	*0.020*	-	*pCi/g*
CX46-022	*750602.497*	*2087516.258*	*1.0*	*1.5*	*Uranium-234*	*3.228*	*300*	*2.640*	-	*pCi/g*
CX46-022	750602.497	2087516.258	1.0	1.5	Uranium-235	0.143	8	0.120	-	pCi/g
CX46-022	750602.497	2087516.258	1.0	1.5	Uranium-238	3.228	351	1.490	-	pCi/g
CX46-027	750719.486	2087294.763	1.0	1.5	Americium-241	4.738	76	0.020	-	pCi/g
CX46-027	*750719.486*	*2087294.763*	*1.0*	*1.5*	*Plutonium-239/240*	*27.007*	*50*	*0.020*	-	*pCi/g*
CX46-027	750719.486	2087294.763	1.0	1.5	Uranium-235	0.200	8	0.120	-	pCi/g
CX46-027	750719.486	2087294.763	1.0	1.5	Uranium-238	1.561	351	1.490	-	pCi/g
CX46-028	750690.935	2087317.717	1.0	1.5	Americium-241	0.388	76	0.020	-	pCi/g
CX46-028	*750690.935*	*2087317.717*	*1.0*	*1.5*	*Plutonium-239/240*	*2.213*	*50*	*0.020*	-	*pCi/g*
CX46-028	750690.935	2087317.717	1.0	1.5	Uranium-238	1.674	351	1.490	-	pCi/g
CX46-029	750708.616	2087360.539	1.0	1.5	Americium-241	1.818	76	0.020	-	pCi/g
CX46-029	*750708.616*	*2087360.539*	*1.0*	*1.5*	*Plutonium-239/240*	*10.363*	*50*	*0.020*	-	*pCi/g*
CX46-029	750708.616	2087360.539	1.0	1.5	Uranium-235	0.214	8	0.120	-	pCi/g
CX46-029	750708.616	2087360.539	1.0	1.5	Uranium-238	1.635	351	1.490	-	pCi/g
CX46-030	*750684.53*	*2087515.957*	*1.0*	*1.5*	*Uranium-234*	*3.343*	*300*	*2.640*	-	*pCi/g*
CX46-030	750684.53	2087515.957	1.0	1.5	Uranium-235	0.249	8	0.120	-	pCi/g
CX46-030	750684.53	2087515.957	1.0	1.5	Uranium-238	3.343	351	1.490	-	pCi/g
CX46-031	750706.145	2087512.776	1.0	1.5	Uranium-238	1.957	351	1.490	-	pCi/g
CY46-000	750756.138	2087678.875	11.0	11.5	Acetone	10.000	102000000	-	1.800	ug/kg
CY46-000	750756.138	2087678.875	11.0	11.5	Americium-241	0.134	76	0.020	-	pCi/g
CY46-000	750756.138	2087678.875	11.0	11.5	Plutonium-239/240	0.306	50	0.020	-	pCi/g
CY46-000	750756.138	2087678.875	11.0	11.5	Trichloroethene	1.000	19600	-	0.170	ug/kg
CY46-000	750756.138	2087678.875	11.0	11.5	Uranium-235	0.180	8	0.120	-	pCi/g

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CY46-001	750730.429	2087631.881	6.0	6.5	Americium-241	0.284	76	0.020	-	pCi/g
CY46-001	*750730.429*	*2087631.881*	*6.0*	*6.5*	*Plutonium-239/240*	*1.617*	*50*	*0.020*	-	*pCi/g*
CY46-004	750711.293	2087647.712	1.1	1.6	Americium-241	0.305	76	0.020	-	pCi/g
CY46-004	*750711.293*	*2087647.712*	*1.1*	*1.6*	*Plutonium-239/240*	*1.736*	*50*	*0.020*	-	*pCi/g*
CY46-004	750711.293	2087647.712	1.1	1.6	Uranium-235	0.171	8	0.120	-	pCi/g
CY46-009	750829.756	2087718.664	1.0	1.5	Americium-241	0.536	76	0.020	-	pCi/g
CY46-009	750829.756	2087718.664	1.0	1.5	Plutonium-239/240	0.889	50	0.020	-	pCi/g
CY47-000	750768.247	2087712.713	11.5	12.0	Americium-241	1.537	76	0.020	-	pCi/g
CY47-000	*750768.247*	*2087712.713*	*11.5*	*12.0*	*Plutonium-239/240*	*8.761*	*50*	*0.020*	-	*pCi/g*
CY47-001	750803.579	2087719.215	8.2	8.7	Americium-241	1.290	76	0.020	-	pCi/g
CY47-001	*750803.579*	*2087719.215*	*8.2*	*8.7*	*Plutonium-239/240*	*7.353*	*50*	*0.020*	-	*pCi/g*
CY47-001	*750803.579*	*2087719.215*	*8.2*	*8.7*	*Uranium-234*	*3.410*	*300*	*2.640*	-	*pCi/g*
CY47-001	750803.579	2087719.215	8.2	8.7	Uranium-238	3.410	351	1.490	-	pCi/g
CY47-002	750768.895	2087632.216	3.1	3.6	Americium-241	0.503	76	0.020	-	pCi/g
CY47-002	*750768.895*	*2087632.216*	*3.1*	*3.6*	*Plutonium-239/240*	*2.864*	*50*	*0.020*	-	*pCi/g*
CY47-002	750768.895	2087632.216	3.1	3.6	Uranium-235	0.183	8	0.120	-	pCi/g
CY47-013	750822.73	2087676.558	1.0	1.5	Americium-241	2.250	76	0.020	-	pCi/g
CY47-013	750822.73	2087676.558	1.0	1.5	Plutonium-239/240	7.190	50	0.020	-	pCi/g
CY47-015	750820.504	2087641.743	1.0	1.5	Americium-241	4.280	76	0.020	-	pCi/g
CY47-015	750820.504	2087641.743	1.0	1.5	Plutonium-239/240	9.750	50	0.020	-	pCi/g
CY47-015	750820.504	2087641.743	1.0	1.5	Uranium-238	2.040	351	1.490	-	pCi/g
CZ46-000	750745.875	2087835.452	2.4	2.9	Uranium-235	0.214	8	0.120	-	pCi/g
CZ46-000	750745.875	2087835.452	2.4	2.9	Uranium-238	1.543	351	1.490	-	pCi/g
CZ46-001	750733.745	2087801.588	3.4	3.9	Uranium-238	2.236	351	1.490	-	pCi/g
CZ46-002	750757.042	2087774.081	11.7	12.2	Acetone	15.000	102000000	-	1.800	ug/kg
CZ46-002	750757.042	2087774.081	11.7	12.2	Naphthalene	0.960	3090000	-	0.460	ug/kg
CZ46-002	750757.042	2087774.081	11.7	12.2	Tetrachloroethene	2.200	615000	-	0.220	ug/kg
CZ46-002	750757.042	2087774.081	11.7	12.2	Trichloroethene	9.300	19600	-	0.170	ug/kg
CZ46-003	750823.861	2087840.899	8.2	8.7	Americium-241	0.511	76	0.020	-	pCi/g
CZ46-003	*750823.861*	*2087840.899*	*8.2*	*8.7*	*Plutonium-239/240*	*2.913*	*50*	*0.020*	-	*pCi/g*
CZ46-004	750724.474	2087760.439	0.9	1.4	Americium-241	0.172	76	0.020	-	pCi/g

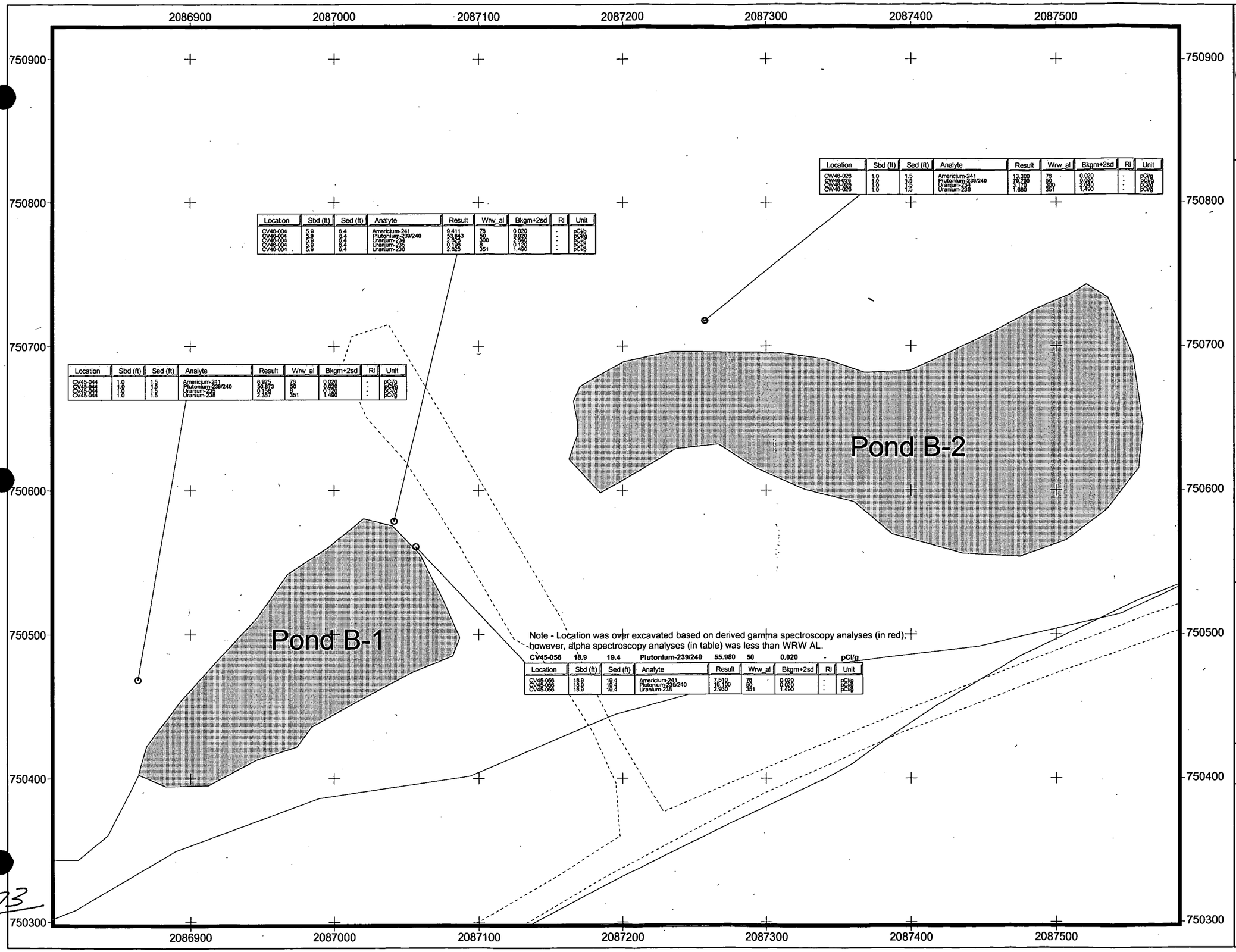
Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CZ46-004	750724.474	2087760.439	0.9	1.4	Plutonium-239/240	0.215	50	0.020	-	pCi/g
CZ47-000	*750781.261*	*2087841.902*	*9.4*	*9.9*	*Uranium-234*	*2.790*	*300*	*2.640*	-	*pCi/g*
CZ47-000	750781.261	2087841.902	9.4	9.9	Uranium-235	0.136	8	0.120	-	pCi/g
CZ47-000	750781.261	2087841.902	9.4	9.9	Uranium-238	2.790	351	1.490	-	pCi/g
CZ47-001	750769.107	2087808.046	12.6	13.1	Uranium-235	0.157	8	0.120	-	pCi/g
CZ47-001	750769.107	2087808.046	12.6	13.1	Uranium-238	2.044	351	1.490	-	pCi/g
CZ47-002	750804.589	2087814.504	14.6	15.1	2-Butanone	5.100	192000000	-	1.800	ug/kg
CZ47-002	750804.589	2087814.504	14.6	15.1	Acetone	25.000	102000000	-	1.600	ug/kg
CZ47-002	750804.589	2087814.504	14.6	15.1	Americium-241	1.320	76	0.020	-	pCi/g
CZ47-002	750804.589	2087814.504	14.6	15.1	Aroclor-1254	68.000	12400	-	7.600	ug/kg
CZ47-002	750804.589	2087814.504	14.6	15.1	Carbon Disulfide	1.100	15100000	-	0.150	ug/kg
CZ47-002	750804.589	2087814.504	14.6	15.1	Plutonium-239/240	3.810	50	0.020	-	pCi/g
CZ47-002	750804.589	2087814.504	14.6	15.1	Tetrachloroethene	0.890	615000	-	0.190	ug/kg
CZ47-002	750804.589	2087814.504	14.6	15.1	Toluene	0.140	31300000	-	0.092	ug/kg
CZ47-003	750792.479	2087780.535	13.2	13.7	Uranium-238	1.755	351	1.490	-	pCi/g
CZ47-004	750780.378	2087746.696	11.7	12.2	Uranium-235	0.209	8	0.120	-	pCi/g
CZ47-005	750839.963	2087820.884	10.7	11.2	Uranium-235	0.327	8	0.120	-	pCi/g
CZ47-005	750839.963	2087820.884	10.7	11.2	Uranium-238	2.029	351	1.490	-	pCi/g
CZ47-006	750827.9	2087787.021	7.8	8.3	Americium-241	1.650	76	0.020	-	pCi/g
CZ47-006	*750827.9*	*2087787.021*	*7.8*	*8.3*	*Plutonium-239/240*	*9.405*	*50*	*0.020*	-	*pCi/g*
CZ47-006	750827.9	2087787.021	7.8	8.3	Uranium-235	0.207	8	0.120	-	pCi/g
CZ47-007	750815.798	2087753.157	6.0	6.5	2-Butanone	6.600	192000000	-	1.700	ug/kg
CZ47-007	750815.798	2087753.157	6.0	6.5	Acetone	51.000	102000000	-	1.500	ug/kg
CZ47-007	750815.798	2087753.157	6.0	6.5	Americium-241	0.905	76	0.020	-	pCi/g
CZ47-007	750815.798	2087753.157	6.0	6.5	Aroclor-1254	220.000	12400	-	7.200	ug/kg
CZ47-007	750815.798	2087753.157	6.0	6.5	bis(2-Ethylhexyl)phthalate	480.000	1970000	-	34.000	ug/kg
CZ47-007	750815.798	2087753.157	6.0	6.5	Carbon Disulfide	7.200	15100000	-	0.140	ug/kg
CZ47-007	750815.798	2087753.157	6.0	6.5	Methylene chloride	1.500	2530000	-	0.340	ug/kg
CZ47-007	750815.798	2087753.157	6.0	6.5	Plutonium-239/240	2.010	50	0.020	-	pCi/g
CZ47-007	750815.798	2087753.157	6.0	6.5	Tetrachloroethene	3.600	615000	-	0.190	ug/kg
CZ47-007	750815.798	2087753.157	6.0	6.5	Toluene	0.260	31300000	-	0.087	ug/kg

Location	Northing	Easting	Starting Depth (ft)	Ending Depth (ft)	Analyte	Result	WRW AL	Background Mean Plus 2 SD	RL	Unit
CZ47-007	750815.798	2087753.157	6.0	6.5	Trichloroethene	0.540	19600	-	0.140	ug/kg
CZ47-008	750791.105	2087683.773	6.5	7.0	Plutonium-239/240	0.367	50	0.020	-	pCi/g
CZ47-009	750791.738	2087649.371	1.0	1.5	Americium-241	0.747	76	0.020	-	pCi/g
CZ47-009	*750791.738*	*2087649.371*	*1.0*	*1.5*	*Plutonium-239/240*	*4.258*	*50*	*0.020*	-	*pCi/g*
CZ47-010	750743.323	2087738.911	5.3	5.8	Uranium-235	0.201	8	0.120	-	pCi/g
CZ47-010	750743.323	2087738.911	5.3	5.8	Uranium-238	1.817	351	1.490	-	pCi/g
CZ47-011	750845.672	2087763.463	1.0	1.5	Americium-241	0.911	76	0.020	-	pCi/g
CZ47-011	*750845.672*	*2087763.463*	*1.0*	*1.5*	*Plutonium-239/240*	*5.192*	*50*	*0.020*	-	*pCi/g*
CZ47-011	750845.672	2087763.463	1.0	1.5	Uranium-238	1.511	351	1.490	-	pCi/g
CZ47-012	750860.414	2087802.911	0.2	0.7	Americium-241	0.944	76	0.020	-	pCi/g
CZ47-012	*750860.414*	*2087802.911*	*0.2*	*0.7*	*Plutonium-239/240*	*5.382*	*50*	*0.020*	-	*pCi/g*
CZ47-012	750860.414	2087802.911	0.2	0.7	Uranium-238	1.694	351	1.490	-	pCi/g
CZ47-013	750853.308	2087832.498	3.1	3.6	Americium-241	0.498	76	0.020	-	pCi/g
CZ47-013	*750853.308*	*2087832.498*	*3.1*	*3.6*	*Plutonium-239/240*	*2.839*	*50*	*0.020*	-	*pCi/g*
CZ47-013	750853.308	2087832.498	3.1	3.6	Uranium-235	0.174	8	0.120	-	pCi/g
CZ47-020	750831.408	2087609.167	1.0	1.5	Plutonium-239/240	0.114	50	0.020	-	pCi/g

Bold type denotes AL exceedance.
Italic type denotes values derived from HPGe measurement.

Figure 5

IHSS Group NE-1 (Ponds B-1 and B-2) In-Process Soil Sampling Results Greater Than Background Means Plus Two Standard Deviations or RLs



Location	Sbd (ft)	Sed (ft)	Analyte	Result	Wrw_al	Bkgm+2sd	RI	Unit
CV46-004	5.9	6.4	Americium-241	9.411	78	0.020	-	pCi/g
CV46-004	5.9	6.4	Plutonium-239/240	53.643	50	0.020	-	pCi/g
CV46-004	5.9	6.4	Uranium-233	2.826	300	2.490	-	pCi/g
CV46-004	5.9	6.4	Uranium-235	0.156	8	0.120	-	pCi/g
CV46-004	5.9	6.4	Uranium-238	2.626	351	1.490	-	pCi/g

Location	Sbd (ft)	Sed (ft)	Analyte	Result	Wrw_al	Bkgm+2sd	RI	Unit
CV46-026	1.0	1.5	Americium-241	13.300	78	0.020	-	pCi/g
CV46-026	1.0	1.5	Plutonium-239/240	76.700	50	0.020	-	pCi/g
CV46-026	1.0	1.5	Uranium-233	3.170	300	2.490	-	pCi/g
CV46-026	1.0	1.5	Uranium-238	1.680	351	1.490	-	pCi/g

Location	Sbd (ft)	Sed (ft)	Analyte	Result	Wrw_al	Bkgm+2sd	RI	Unit
CV45-044	1.0	1.5	Americium-241	8.925	78	0.020	-	pCi/g
CV45-044	1.0	1.5	Plutonium-239/240	50.873	50	0.020	-	pCi/g
CV45-044	1.0	1.5	Uranium-235	0.154	8	0.120	-	pCi/g
CV45-044	1.0	1.5	Uranium-238	2.357	351	1.490	-	pCi/g

Location	Sbd (ft)	Sed (ft)	Analyte	Result	Wrw_al	Bkgm+2sd	RI	Unit
CV45-056	18.9	19.4	Americium-241	7.510	78	0.020	-	pCi/g
CV45-056	18.9	19.4	Plutonium-239/240	16.100	50	0.020	-	pCi/g
CV45-056	18.9	19.4	Uranium-238	2.930	351	1.490	-	pCi/g

Key

- Location with activity greater than WRW AL
- Pond
- Dirt road
- Stream, ditch, or other drainage feature

N
W E
S

30 0 30 60 Feet

Scale = 1:600

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for:

Date: 05-17-05

KAISER•HILL COMPANY

File:W:\Projects\Fy2005\NE-1_B-Ponds\COR\B_ponds_COR.apr

2.4 SORs

Radionuclide sums of ratios (SORs) for surface soil (0 to 3 feet [ft]) were calculated for IHSS Group NE-1 (Ponds B-1, B-2, and B-3) sampling locations based on the accelerated action analytical data for the contaminants of concern (COCs) and WRW ALs. Radionuclide SORs were calculated for all locations with analytical results greater than background means plus two standard deviations for americium-241, plutonium-239/240, uranium-234, uranium-235, and uranium-238. Plutonium-239/240 activities are derived from americium-241 activities (that is, plutonium-239/240 activity = americium-241 gamma spectroscopy activity x 5.7) when americium-241 is measured using high-purity germanium (HPGe) detection analysis. In accordance with RFCA (DOE et al. 2003), the AL of 116 picocuries per gram (pCi/g) plutonium-239/240 is used in the SOR calculation. SORs for radionuclides in surface soil are presented in Table 4. As shown, 29 SORs for radionuclides in surface soil were greater than 1. All locations with a SOR exceeding 1 were characterization samples and were remediated during excavation of the ponds.

Table 4
IHSS Group NE-1 (Ponds B-1, B-2, and B-3)
Radionuclide SORs for Surface Soil

Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CU45-000	**0**	**1**	**2.284**
CU45-000	**1**	**2**	**1.267**
CU45-001	0	1	0.179
CU45-001	1	1.5	0.255
CU45-002	0	1	0.367
CU45-002	**1**	**1.5**	**3.870**
CU45-003	0	1	0.183
CU45-003	1	1.2	0.072
CU45-004	**0**	**1**	**4.511**
CU45-004	**1.5**	**2**	**4.926**
CU45-005	**0**	**1**	**5.462**
CU45-005	**1.5**	**2**	**6.711**
CU45-006	0	1	0.671
CU45-006	**1**	**1.5**	**1.897**
CU45-007	0	1	0.052
CU45-007	1	1.5	0.933
CU45-008	0	0.2	0.826
CU45-008	**0.8**	**1**	**7.307**
CU45-009	0	0.2	0.707
CU45-009	**0.7**	**0.9**	**2.358**
CU45-010	0	0.2	0.295
CU45-010	0.8	1	0.887
CU45-011	0	0.2	0.077
CU45-011	1.3	1.5	0.055
CU45-014	1	1.5	0.432
CU45-015	1	1.5	0.201
CU45-016	2.1	2.6	0.352

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Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CU45-018	1	1.5	0.036
CV45-000	1.1	1.6	0.005
CV45-001	2.4	2.9	0.196
CV45-012	1	1.5	0.074
CV45-013	1	1.5	0.195
CV45-015	1	1.5	0.461
CV45-018	0	0.5	0.372
CV45-018	0.5	1	0.048
CV45-019	0	0.5	0.065
CV45-019	0.5	1	0.039
CV45-020	0	1	0.957
CV45-020	2.5	3	0.657
CV45-021	0	2	0.641
CV45-021	2	2.5	0.937
CV45-022	**0**	**1**	**4.802**
CV45-023	**0**	**0.5**	**4.299**
CV45-023	**0.5**	**1**	**1.586**
CV45-024	0	1	0.647
CV45-024	**1**	**3**	**2.813**
CV45-025	0	1	0.390
CV45-025	**2.5**	**3**	**1.450**
CV45-026	**0**	**0.2**	**1.910**
CV45-027	**0**	**0.2**	**1.613**
CV45-027	1.1	1.3	0.491
CV45-028	**0**	**0.2**	**1.352**
CV45-028	0.6	0.7	0.159
CV45-029	**0**	**0.2**	**2.955**
CV45-030	0	0.2	0.832
CV45-030	0.8	1	0.220
CV45-031	0	0.2	0.103
CV45-031	0.7	0.9	0.018
CV45-032	0	0.2	0.660
CV45-032	**1.3**	**1.5**	**4.773**
CV45-033	0	0.2	0.777
CV45-034	0	0.2	0.391
CV45-034	**0.8**	**1**	**2.700**
CV45-035	0	0.2	0.114
CV45-035	0.8	1	0.062
CV45-036	0	0.2	0.330
CV45-037	0	0.2	0.253
CV45-037	0.8	1	0.136
CV45-038	0	0.2	0.108
CV45-038	0.3	0.5	0.089
CV45-039	0	0.3	0.482
CV45-040	0	0.3	0.467
CV45-040	**1.5**	**1.8**	**2.333**
CV45-041	**0**	**0.3**	**1.152**
CV45-042	1	1.3	0.439

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Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CV45-044	1	1.5	0.582
CV45-044	1.7	2.2	0.063
CV45-045	1	1.5	0.046
CV45-047	1.5	2	0.105
CV45-049	1	1.5	0.022
CV45-050	1	1.5	0.030
CV45-052	1	1.5	0.126
CV45-053	1	1.5	0.032
CV45-054	1.5	2	0.050
CV45-055	1.6	2.1	0.069
CV45-057	1	1.5	0.327
CV46-003	1	1.5	0.082
CV46-005	1.4	1.9	0.360
CV46-009	1	1.5	0.571
CV46-012	1.3	1.8	0.021
CV46-013	1	1.5	0.189
CV46-014	1.2	1.7	0.092
CV46-015	1	1.5	0.036
CW45-000	1	1.5	0.278
CW45-001	1	1.5	0.005
CW45-002	0	0.5	0.084
CW45-002	0.5	1	0.053
CW45-003	0	0.5	0.015
CW45-003	0.5	1	0.028
CW45-004	0	0.1	0.407
CW45-004	**1.5**	**2**	**13.679**
CW45-005	0	0.5	0.127
CW45-005	0.5	1	0.065
CW46-009	2.4	2.9	0.029
CW46-010	1	1.5	0.055
CW46-011	1	1.5	0.014
CW46-012	0.2	0.7	0.253
CW46-013	1	1.5	0.353
CW46-014	1	1.5	0.442
CW46-015	1	1.5	0.333
CW46-016	1	1.5	0.011
CW46-017	**0**	**0.5**	**18.023**
CW46-017	**2**	**2.5**	**9.330**
CW46-018	0	0.5	0.085
CW46-018	0.5	1	0.066
CW46-019	0	0.5	0.547
CW46-019	**2.5**	**3**	**8.774**
CW46-020	0	0.5	0.049
CW46-020	2	3	0.070
CW46-023	1	1.5	0.052
CW46-024	1	1.5	0.274
CW46-025	1	1.5	0.333
CW46-026	1	1.5	0.877

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Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CX45-000	2.2	2.7	0.044
CX45-001	1.2	1.7	0.103
CX45-002	0	0.5	0.095
CX45-002	1	1.5	0.017
CX46-017	1	1.5	0.031
CX46-018	1.6	2.1	0.022
CX46-021	1.6	2.1	0.043
CX46-022	1	1.5	0.173
CX46-023	0	0.5	0.326
CX46-023	0.5	1	0.365
CX46-024	0	0.5	0.177
CX46-024	**2.5**	**3**	**3.446**
CX46-027	1	1.5	0.325
CX46-028	1	1.5	0.029
CX46-029	1	1.5	0.145
CX46-030	1	1.5	0.052
CX46-031	1	1.5	0.006
CX47-000	0	0.5	0.091
CX47-000	0.5	1.5	0.007
CY46-004	1.1	1.6	0.040
CY46-005	0	0.5	0.071
CY46-005	0.5	1	0.317
CY46-006	0	0.5	0.196
CY46-006	0.5	1	0.119
CY46-007	0	0.5	0.149
CY46-007	0.5	1	0.013
CY46-008	0	0.5	0.165
CY46-008	0.5	1	0.041
CY46-009	1	1.5	0.015
CY47-003	0	0.5	0.094
CY47-003	0.5	1	0.315
CY47-004	0	0.5	0.319
CY47-004	**0**	**1**	**2.078**
CY47-005	0	0.5	0.121
CY47-005	0.1	1.5	0.037
CY47-006	0	0.5	0.112
CY47-006	1	1.5	0.053
CY47-007	0	0.5	0.178
CY47-007	0.5	1	0.028
CY47-008	0	0.5	0.147
CY47-008	0.5	1	0.069
CY47-009	0	0.5	0.037
CY47-009	0.5	1.5	0.024
CY47-013	1	1.5	0.092
CY47-015	1	1.5	0.146
CZ46-000	2.4	2.9	0.031
CZ46-004	0.9	1.4	0.004
CZ46-005	0	0.5	0.074

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Location	Starting Depth (ft)	Ending Depth (ft)	SOR
CZ46-005	0.5	1	0.006
CZ46-006	0	0.5	0.095
CZ46-006	0.5	1	0.064
CZ47-009	1	1.5	0.047
CZ47-011	1	1.5	0.061
CZ47-012	0.2	0.7	0.064
CZ47-014	0	0.5	0.231
CZ47-014	0.5	1	0.426
CZ47-015	0	0.5	0.053
CZ47-015	0.5	1	0.062
CZ47-016	0	0.5	0.038
CZ47-016	1	1.5	0.067
CZ47-020	1	1.5	0.001

SORs for nonradionuclides were calculated for all surface soil (0 to 0.5 ft) where analyte concentrations were 10 percent or more of a contaminant's WRW AL. Because all nonradionuclide concentrations were below 10 percent or more of all contaminant WRW ALs, no SORs are reported for nonradionuclides in surface soil.

3.0 SUMMARY STATISTICS

Summary statistics, by analyte, were calculated for the IHSS Group NE-1 (Ponds B-1, B-2, and B-3) surface soil and subsurface soil sampling locations (Tables 5 and 6, respectively). These summaries are based on detected concentrations only for organics and above background means plus two standard deviations for inorganics.

Table 5
Surface Soil Summary Statistics

Analyte	Number of Samples	Detection Frequency	Average Concentration	Maximum Concentration	WRW AL	Background Mean Plus 2SD	Unit
Americium-241	52	94.23%	13.275	287	76	0.023	pCi/g
Plutonium-239/240	52	94.23%	74.812	1635.9	50	0.066	pCi/g
Uranium-234	52	65.38%	4.722	15.41	300	2.253	pCi/g
Uranium-235	52	73.08%	0.242	0.5656	8	0.094	pCi/g
Uranium-238	52	75.00%	4.416	15.41	351	2.000	pCi/g

Table 6
Subsurface Soil Summary Statistics

Analyte	Number of Samples	Detection Frequency	Average Concentration	Maximum Concentration	WRW AL	Background Mean Plus 2SD	Unit
1,2,4-Trichlorobenzene	15	6.67%	1.000	1	9230000	-	ug/kg
2-Butanone	15	26.67%	8.425	12	192000000	-	ug/kg

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Analyte	Number of Samples	Detection Frequency	Average Concentration	Maximum Concentration	WRW AL	Background Mean Plus 2SD	Unit
Acetone	15	80.00%	30.358	78	102000000	-	ug/kg
Americium-241	210	67.62%	14.589	291	76	0.020	pCi/g
Aroclor-1016	15	6.67%	37.000	37	46400	-	ug/kg
Aroclor-1254	15	46.67%	176.743	360	12400	-	ug/kg
Barium	15	6.67%	410.000	410	26400	289.380	mg/kg
Benzo(a)anthracene	15	13.33%	69.500	84	34900	-	ug/kg
Benzo(a)pyrene	15	6.67%	63.000	63	3490	-	ug/kg
Benzo(b)fluoranthene	15	6.67%	97.000	97	34900	-	ug/kg
Benzoic Acid	15	6.67%	330.000	330	1000000000	-	ug/kg
bis(2-Ethylhexyl)phthalate	15	40.00%	1620.000	4800	1970000	-	ug/kg
Cadmium	15	6.67%	2.400	2.4	962	1.700	mg/kg
Carbon Disulfide	15	33.33%	2.142	7.2	15100000	-	ug/kg
Carbon Tetrachloride	15	26.67%	1.170	2.4	81500	-	ug/kg
Chloroform	15	20.00%	2.017	4.4	19200	-	ug/kg
Chrysene	15	13.33%	79.500	80	3490000	-	ug/kg
Diethylphthalate	15	13.33%	155.000	160	590000000	-	ug/kg
Fluoranthene	15	6.67%	170.000	170	27200000	-	ug/kg
Methylene chloride	15	66.67%	2.550	4.6	2530000	-	ug/kg
Naphthalene	15	33.33%	1.412	2.5	3090000	-	ug/kg
Phenol	15	6.67%	46.000	46	613000000	-	ug/kg
Plutonium-239/240	210	70.48%	72.122	1120	50	0.020	pCi/g
Tetrachloroethene	15	46.67%	11.856	55	615000	-	ug/kg
Toluene	15	20.00%	0.250	0.35	31300000	-	ug/kg
Trichloroethene	15	46.67%	165.560	1100	19600	-	ug/kg
Uranium-234	210	34.29%	5.795	26.24	300	2.640	pCi/g
Uranium-235	210	63.33%	0.259	1.519	8	0.120	pCi/g
Uranium-238	210	71.43%	3.866	26.24	351	1.490	pCi/g

4.0 ACCELERATED ACTION

Accelerated action objectives were developed for IHSS Group NE-1 (Ponds B-1, B-2, and B-3) and are described in ER RSOP Notification #04-11 (DOE 2004a). The ER RSOP remedial action objectives (RAOs) included the following:

- Provide a remedy consistent with the RFETS goal of protection of human health and the environment;
- Provide a remedy that minimizes the need for long-term maintenance and institutional or engineering controls;
- Minimize the spread of contaminants during implementation of accelerated actions; and
- Minimize disturbances to habitat, including impacts to wildlife species, and control of soil erosion, in the area due to remediation activities.

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The accelerated action remediation goals for IHSS Group NE-1 (Ponds B-1, B-2, and B-3) included the following:

- Remove all sediment from Ponds B-1, B-2, and B-3.
- Following the removal of contaminated sediment and soil, collect confirmation soil samples in accordance with the IASAP (DOE 2001).
- Remvoe sediment laterally to the average water mark or until confirmation sampling indicates no further sediment or soil removal is necessary in accordance with RFCA.
- Remove sediment and soil with plutonium-239/240 or americium-241 activities greater than the RFCA WRW ALs. If confirmation samples indicate radionuclide activities are greater than WRW ALs below the excavation surface, conduct an SSRS. Sediment in Ponds B-1, B-2, and B-3 is approximately 2 to 8 ft thick, although areas of thicker sediment may exist. All sediment will be removed from Ponds B-1, B-2, and B-3, and confirmation samples will be collected and analyzed for all PCOCs (metals, radionuclides, PCBs, SVOCs, and VOCs) from soil below the sediment. Confirmation samples will be collected from the first 6-inch interval below the excavation surface.
- Remove soil from the "Pond B-1 Dam Hot Spot," located between Pond B-1 and Pond B-2 on the far eastern side of the Pond B-1 dam.

ER accelerated action activities were conducted between October 21, 2004, and March 10, 2005. Starting and ending dates of significant activities are listed in Table 7. Photographs of site activities are presented in Appendix A. All accelerated action objectives were achieved. Removal activities are described below.

Table 7
IHSS Group NE-1 (Ponds B-1, B-2, and B-3) Dates of Accelerated Action Activities

Activity	Starting Date	Ending Date	Duration
Accelerated action characterization sampling	10/21/04	11/9/04	19 days
Accelerated action removal activities and confirmation sampling	11/24/04	3/10/05	106 days

4.1 Sediment and Soil Removal

The volume of sediment removed from IHSS Group NE-1 (Ponds B-1, B-2, and B-3) was significantly greater than original estimates. Sediment thicknesses were estimated to be 2- to 8-ft thick in the ER RSOP Notification #04-11 (DOE 2004a); however, actual thicknesses of sediment ranged from 2- to over 19-ft.

Approximately 40,500 cubic yards (cy) of sediment and soil were excavated and disposed of from IHSS Group NE-1 (Ponds B-1, B-2, and B-3). Pond B-1 required the most extensive area of remediation due to contamination in the upstream drainage into the pond. The areal extent of the excavation was approximately 113,900 square feet (ft^2) and a total of 7,600 cy of sediment and soil were removed. The deepest point of the excavation in Pond B-1 was 19.4 ft below the original sediment surface at sampling location CV45-056. Pond B-2, although comprising an excavation area less than that of Pond B-1, required the highest

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volume of sediment and soil removal. The areal extent of the Pond B-2 excavation was approximately 52,100 ft² and approximately 20,900 cy of material were removed. The deepest point of the excavation in Pond B-2 was 18.3 ft below the original sediment surface at sampling location CX46-008. Due to the depth of excavation in Pond B-2 and precipitation events during excavation activities, slope stability became a safety risk during the project. To prevent slope failure in Pond B-2, excavation sidewalls were buttressed with clean backfill during operations as communicated in the February 21, 2005 contact record to the agencies (Appendix A). The excavation performed in Pond B-3 covered an area of approximately 26,700 ft² and a total of 12,000 cy of sediment and soil were removed. The deepest point of the excavation in Pond B-3 was 14.6 ft below the initial elevation of the sediment surface at sampling location CZ47-002. Activities and concentrations of all contaminants detected in the confirmation samples were below WRW ALs and all accelerated action objectives were achieved. The excavation area and topography of each excavation is illustrated on Figure 9.

4.2 Site Reclamation

Ponds B-1, B-2, and B-3 were backfilled and graded with clean on site soil. Wetlands in the area were restored after completion of backfilling and grading. The former ponds were reconfigured to create a low-energy environment that includes oxbows, backwater eddies, meandering channels, and establishment of wetlands. Establishment of this low-energy environment will serve to minimize erosion and the potential mobilization of residual contaminants. Wetland re-establishment included revegetation using native plant species, either by seeding, staking, or using container plants, following the guidance and success criteria outlined in Part II of the PBA for the PMJM mitigation (DOE 2004e).

5.0 CONFIRMATION SAMPLING

Following excavation of the sediment in Ponds B-1, B-2, and B-3, 136 confirmation and 4 in-process samples (statistical and biased) were collected from excavation slopes and bottoms. As previously described in Section 2.3, the December 29, 2004 contact record to the agencies (Appendix A) describes biased confirmation sampling locations were determined by the Field Project Manager and were collected in areas not covered by statistical sampling grid locations. Statistical sampling locations were not significantly offset from the proposed locations; however, many of the biased sampling locations were adjusted by the Field Project Manager to target specific areas based on field conditions.

Only four locations (three in Pond B-1 and one in Pond B-2) required overexcavation to remove radionuclide contamination remaining in the soil below the removed sediment. Results of confirmation sampling greater than background means plus two standard deviations are listed in Table 3 and shown on Figures 6, 7, and 8. Activities and concentrations of contaminants were less than RFCA WRW ALs in all confirmation samples.

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6.0 RCRA UNIT CLOSURE

Not applicable. There were no Resource Conservation and Recovery Act (RCRA) units to be closed at IHSS Group NE-1 (Ponds B-1, B-2, and B-3).

7.0 SUBSURFACE SOIL RISK SCREEN

The Subsurface Soil Risk Screen (SSRS) follows the steps identified on Figure 3 in Attachment 5 of RFCA (DOE et al. 2003).

Screen 1 – Are the COC concentrations below Table 3 WRW soil ALs?

Yes. All remaining residual subsurface soil contaminant concentrations are less than WRW ALs.

Screen 4 – Is there an environmental pathway and sufficient quantity of COCs that would cause exceedance of the surface water standards?

No. The nearest downstream Point of Evaluation (POE) is gauging station GS08, which receives flow from all of the B-series ponds and treated effluent from the East Trenches Plume Treatment System. Surface water sample results for plutonium-239/240 and americium-241 have been measured at activities greater than 0.15 picocuries per liter (pCi/L) at GS08 (DOE 2003b).

However, because all pond sediment has been removed, including soil containing contaminants greater than WRW ALs below the removed sediment, the potential for IHSS Group NE-1 (Ponds B-1, B-2, and B-3) to adversely affect surface water quality in the future is considered low. Following backfilling with clean fill material, regrading of the area was conducted to establish a low flow regime in the area, further reducing potential adverse impacts to surface water quality.

8.0 STEWARDSHIP ANALYSIS

The IHSS Group NE-1 (Ponds B-1, B-2, and B-3) stewardship evaluation was conducted through ongoing consultation with the regulatory agencies. Frequent informal project updates, e-mails, and telephone and personal contacts occurred throughout the project. Copies of Regulatory Contact Records are provided in Appendix B.

8.1 Current Site Conditions

As discussed in Section 2.3, accelerated actions at IHSS Group NE-1 (Ponds B-1, B-2, and B-3) consisted of characterization sampling of soil, excavation of all pond sediment and soil, and confirmation sampling of soil. Based upon the accelerated actions performed and analytical results of sampling, conditions at IHSS Group NE-1 (Ponds B-1, B-2, and B-3) include the following:

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- The potential sources of contamination that existed in Ponds B-1, B-2, and B-3 were removed.
- All residual contaminant concentrations are below RFCA WRW ALs.
- IHSS Group NE-1 (Ponds B-1, B-2, and B-3) were regraded with clean fill material and revegetated.

8.2 Near-Term Management Recommendations

IHSS Group-specific, near-term management actions are as follows:

- Install erosion controls as necessary as part of land configuration.

Because residual contaminant concentrations are low and potential contaminant sources have been identified or removed according to accelerated action objective guidelines, other specific near-term management actions are not required. The potential contaminant source and pathway have been removed. Contaminant concentrations in soil remaining at IHSS Group NE-1 (Ponds B-1, B-2, and B-3) do not trigger any further accelerated action.

Near-term recommendations include the following:

- Excavation at the site will continue to be controlled through the Site Soil Disturbance Permit process;
- Access will be restricted; and
- Site access restrictions and the Soil Disturbance Permit process will remain in place pending implementation of long-term controls.

8.3 Long-Term Stewardship Recommendations

Based on remaining environmental conditions at IHSS Group NE-1 (Ponds B-1, B-2, and B-3), no IHSS Group-specific, long-term stewardship activities are recommended beyond the generally applicable Site requirements or institutional controls that may be used as appropriate for this area including the following:

- Prohibitions on construction of buildings;
- Restrictions on excavation or other soil disturbance; and
- Prohibition on groundwater pumping in the area of IHSS Group NE-1 (Ponds B-1, B-2, and B-3).

Currently, none of the above engineering controls or environmental monitoring are recommended as a result of the conditions remaining at IHSS Group NE-1 (Ponds B-1, B-2, and B-3). Likewise, no specific institutional or physical controls are recommended as a result of the conditions remaining at IHSS Group NE-1 (Ponds B-1, B-2, and B-3).

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IHSS Group NE-1 (Ponds B-1, B-2, and B-3) will be evaluated as part of the Sitewide CRA. The CRA is part of the Remedial Investigation/Feasibility Study (RI/FS) that will be conducted for the Site. Potential surface water impacts and water quality monitoring requirements will be addressed in the CRA and RI/FS. The Integrated Monitoring Plan (IMP) will address the need for further groundwater monitoring. Groundwater remediation alternatives will be addressed in the Groundwater Interim Measure/Interim Remedial Action (IM/IRA).

The need for and extent of any more general, long-term stewardship activities will also be analyzed in the RI/FS and proposed as part of the preferred alternative in the Proposed Plan for the Site. Institutional controls and other long-term stewardship requirements for the Site will ultimately be contained in the Corrective Action Decision/Record of Decision (CAD/ROD) and any post-RFCA agreement. This Closeout Report and associated documentation will be retained as part of the Rocky Flats Administrative Record (AR) file.

9.0 DEVIATIONS FROM THE ER RSOP

Original plans for backfilling at IHSS Group NE-1 (Ponds B-1, B-2, and B-3) were limited to filling isolated excavation potholes, surface water control ditches, and areas with potential slope stability problems. However, due to the depth of excavations, the former ponds have been completely backfilled with clean fill material. This reconfiguration activity was conducted under a separate project in consultation with USFWS, DOE, Kaiser-Hill (K-H) Ecology, and USACE.

10.0 POST-ACCELERATED ACTION CONDITIONS

All sediments were excavated from Ponds B-1, B-2, and B-3 during the remediation of IHSS Group NE-1. All residual contaminant concentrations were below RFCA WRW ALs. The excavation topography prior to backfilling and locations of soil samples with residual contaminant concentrations reported at activities or concentrations above background means plus two standard deviations or reporting limits (RLs) are presented on Figure 9. The locations shown on Figure 9 include a combination of accelerated action characterization and confirmation sampling locations. Analytical results for these locations are listed in Table 3 and shown on Figures 4 through 8. Placement of clean fill material and final grading of the area are being conducted as part of another project and have not been completed.

11.0 WASTE MANAGEMENT

Approximately 40,500 cy of contaminated sediment and soil were excavated at IHSS Group NE-1 (Ponds B-1, B-2, and B-3). Sediment was stabilized by mixing with Portland cement prior to excavation activities. The Portland cement mixture accounted for approximately 3.5 percent of the excavated material by weight. All excavated waste material was transferred to the Material Stewardship group for temporary storage and final disposal.

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12.0 SITE RECLAMATION

Final backfilling with clean fill material and grading were performed under a different project. Wetlands in the area were restored after completion of backfilling and grading by creating a meandering channel through the former ponds that includes oxbows and backwater eddies. Re-establishment of wetland vegetation in impacted areas was accomplished using native plant species, either by seeding, staking, or using container plants, following the guidance and success criteria outlined in Part II of the PBA for Preble's mouse mitigation (DOE 2004e). The B-series ponds will be subject to ongoing management to ensure the final configuration of this area will minimize the potential for transport of any residual contamination.

13.0 NLR SAMPLING LOCATIONS

The sampling locations designated NLR for IHSS Group NE-1 (Ponds B-1, B-2, and B-3) are listed in Table 8 and shown on Figure 8. NLR locations are flagged in the RFETS Soil Water Database (SWD) to ensure they will not be incorporated into the Sitewide CRA or other Site analyses.

Table 8
IHSS Group NE-1 (Ponds B-1, B-2, and B-3) NLR Sampling Locations

Location	Northing	Easting	Media	Starting Depth (ft)	Ending Depth (ft)
Accelerated Action Sampling Locations					
CU45-000	750421.119	2086924.096	Soil	0.0	1.0
CU45-000	750421.119	2086924.096	Soil	1.0	2.0
CU45-001	750430.462	2086919.941	Soil	0.0	1.0
CU45-001	750430.462	2086919.941	Soil	1.0	1.5
CU45-002	750383.08	2086900.464	Soil	0.0	1.0
CU45-002	750383.08	2086900.464	Soil	1.0	1.5
CU45-003	750373.39	2086903.351	Soil	0.0	1.0
CU45-003	750373.39	2086903.351	Soil	1.0	1.2
CU45-004	750401.643	2086890.816	Soil	0.0	1.0
CU45-004	750401.643	2086890.816	Soil	1.5	2.0
CU45-005	750410.782	2086886.797	Soil	0.0	1.0
CU45-005	750410.782	2086886.797	Soil	1.5	2.0
CU45-006	750374.756	2086852.199	Soil	0.0	1.0
CU45-006	750374.756	2086852.199	Soil	1.0	1.5
CU45-007	750372.944	2086847.85	Soil	0.0	1.0
CU45-007	750372.944	2086847.85	Soil	1.0	1.5
CU45-008	750411.505	2086929.315	Soil	0.0	0.2
CU45-008	750411.505	2086929.315	Soil	0.8	1.0
CU45-009	750392.122	2086895.904	Soil	0.0	0.2
CU45-009	750392.122	2086895.904	Soil	0.7	0.9
CU45-010	750375.996	2086855.679	Soil	0.0	0.2
CU45-010	750375.996	2086855.679	Soil	0.8	1.0
CV45-020	750424.051	2086966.057	Soil	0.0	1.0
CV45-020	750424.051	2086966.057	Soil	2.5	3.0
CV45-021	750416.602	2086970.549	Soil	0.0	2.0
CV45-021	750416.602	2086970.549	Soil	2.0	2.5
CV45-022	750440.605	2086953.031	Soil	0.0	1.0

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Location	Northing	Easting	Media	Starting Depth (ft)	Ending Depth (ft)
CV45-022	750440.605	2086953.031	Soil	0.0	1.0
CV45-023	750450.199	2086946.042	Soil	0.0	0.5
CV45-023	750450.199	2086946.042	Soil	0.5	1.0
CV45-024	750401.471	2086934.263	Soil	0.0	1.0
CV45-024	750401.471	2086934.263	Soil	1.0	3.0
CV45-025	750391.795	2086938.791	Soil	0.0	1.0
CV45-025	750391.795	2086938.791	Soil	2.5	3.0
CV45-026	750510.2	2087095.858	Soil	0.0	0.2
CV45-027	750496.863	2087101.607	Soil	0.0	0.2
CV45-027	750496.863	2087101.607	Soil	0.0	0.2
CV45-027	750496.863	2087101.607	Soil	0.0	0.2
CV45-027	750496.863	2087101.607	Soil	0.0	0.2
CV45-027	750496.863	2087101.607	Soil	1.1	1.3
CV45-027	750496.863	2087101.607	Soil	1.1	1.3
CV45-027	750496.863	2087101.607	Soil	1.1	1.3
CV45-027	750496.863	2087101.607	Soil	1.1	1.3
CV45-028	750485.941	2087107.399	Soil	0.0	0.2
CV45-028	750485.941	2087107.399	Soil	0.6	0.7
CV45-029	750471.261	2087037.901	Soil	0.0	0.2
CV45-029	750471.261	2087037.901	Soil	0.0	0.2
CV45-030	750462.14	2087042.186	Soil	0.0	0.2
CV45-030	750462.14	2087042.186	Soil	0.8	1.0
CV45-031	750454.988	2087045.867	Soil	0.0	0.2
CV45-031	750454.988	2087045.867	Soil	0.7	0.9
CV45-032	750431.261	2086960.034	Soil	0.0	0.2
CV45-032	750431.261	2086960.034	Soil	1.3	1.5
CV45-033	750491.622	2086995.534	Soil	0.0	0.2
CV45-034	750493.747	2086993.848	Soil	0.0	0.2
CV45-034	750493.747	2086993.848	Soil	0.8	1.0
CV45-035	750496.213	2086990.33	Soil	0.0	0.2
CV45-035	750496.213	2086990.33	Soil	0.8	1.0
CV45-036	750534.965	2087038.675	Soil	0.0	0.2
CV45-037	750541.461	2087032.495	Soil	0.0	0.2
CV45-037	750541.461	2087032.495	Soil	0.8	1.0
CV45-038	750547.384	2087029.143	Soil	0.0	0.2
CV45-038	750547.384	2087029.143	Soil	0.3	0.5
CV45-039	750539.81	2087128.342	Soil	0.0	0.3
CV45-040	750540.893	2087129.85	Soil	0.0	0.3
CV45-040	750540.893	2087129.85	Soil	1.5	1.8
CV45-041	750556.808	2087118.126	Soil	0.0	0.3
CV45-042	750558.332	2087120.833	Soil	1.0	1.3
CW45-004	750606.503	2087203.314	Soil	0.0	0.1
CW45-004	750606.503	2087203.314	Soil	1.5	2.0
CW45-005	750612.035	2087211.366	Soil	0.0	0.5
CW45-005	750612.035	2087211.366	Soil	0.5	1.0
CW46-017	750636.498	2087198.402	Soil	0.0	0.5
CW46-017	750636.498	2087198.402	Soil	2.0	2.5
CW46-018	750636.911	2087214.192	Soil	0.0	0.5
CW46-018	750636.911	2087214.192	Soil	0.0	0.5
CW46-018	750636.911	2087214.192	Soil	0.5	1.0
CW46-019	750664.649	2087323.055	Soil	0.0	0.5
CW46-019	750664.649	2087323.055	Soil	2.5	3.0
CW46-020	750676.218	2087321.87	Soil	0.0	0.5
CW46-020	750676.218	2087321.87	Soil	2.0	3.0
CX45-002	750608.75	2087325.924	Soil	0.0	0.5
CX45-002	750608.75	2087325.924	Soil	1.0	1.5

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Location	Northing	Easting	Media	Starting Depth (ft)	Ending Depth (ft)
CX46-023	750613.009	2087327.922	Soil	0.0	0.5
CX46-023	750613.009	2087327.922	Soil	0.5	1.0
CX46-024	750673.883	2087418.411	Soil	0.0	0.5
CX46-024	750673.883	2087418.411	Soil	2.5	3.0
CX47-000	750680.149	2087413.446	Soil	0.0	0.5
CX47-000	750680.149	2087413.446	Soil	0.5	1.5
CY46-005	750565.53	2087456.108	Soil	0.0	0.5
CY46-005	750565.53	2087456.108	Soil	0.5	1.0
CY46-006	750571.12	2087454.748	Soil	0.0	0.5
CY46-006	750571.12	2087454.748	Soil	0.5	1.0
CY46-008	750736.701	2087710.251	Soil	0.0	0.5
CY46-008	750736.701	2087710.251	Soil	0.5	1.0
CY47-003	750643.455	2087511.731	Soil	0.0	0.5
CY47-003	750643.455	2087511.731	Soil	0.5	1.0
CY47-004	750685.704	2087503.355	Soil	0.0	0.5
CY47-004	750685.704	2087503.355	Soil	0.0	1.0
CY47-005	750687.01	2087511.614	Soil	0.0	0.5
CY47-005	750687.01	2087511.614	Soil	0.1	1.5
CY47-006	750645.731	2087517.962	Soil	0.0	0.5
CY47-006	750645.731	2087517.962	Soil	1.0	1.5
CY47-008	750786.298	2087676.273	Soil	0.0	0.5
CY47-008	750786.298	2087676.273	Soil	0.5	1.0
CY47-009	750816.758	2087735.442	Soil	0.0	0.5
CY47-009	750816.758	2087735.442	Soil	0.5	1.5
CZ47-016	750837.001	2087784.626	Soil	0.0	0.5
CZ47-016	750837.001	2087784.626	Soil	1.0	1.5
CV45-044A	750495.006	2086961.481	Soil	1.0	1.5
CV45-056A	750569.183	2087115.822	Soil	18.9	19.4
CV46-004A	750583.315	2087103.753	Soil	5.9	6.4
CW46-026A	750694.721	2087276.247	Soil	1.0	1.5
Preaccelerated Action Sampling Locations					
CW46-000	750620.590	2087199.556	Soil	0.00	0.50
CW46-001	750650.056	2087202.325	Soil	0.00	0.50
CW46-001	750650.056	2087202.325	Soil	0.50	1.50
SED10104	750439	2086975	Sediment	0.00	1.00
SED10204	750511	2087017	Sediment	0.00	1.00
SED10304	750546	2087121	Sediment	0.00	1.00
SED10404	750630	2087261	Sediment	0.00	1.00
SED10604	750649	2087506	Sediment	0.00	1.00
SED10704	750732	2087655	Sediment	0.00	1.00
SED10804	750782	2087784	Sediment	0.00	1.00
SED10904	750791	2087843	Sediment	0.00	1.00
SED62092	750535.5	2087056.75	Sediment	0.00	0.50
SED62092	750535.5	2087056.75	Sediment	0.00	2.00
SED62092	750535.5	2087056.75	Sediment	0.00	2.83
SED62192	750518.43	2087117	Sediment	0.00	0.50
SED62192	750518.43	2087117	Sediment	0.00	1.00
SED62292	750531.31	2087101.5	Sediment	0.00	0.50
SED62292	750531.31	2087101.5	Sediment	0.00	2.00
SED62292	750531.31	2087101.5	Sediment	0.00	2.83
SED62392	750554.68	2087077.62	Sediment	0.00	0.50
SED62392	750554.68	2087077.62	Sediment	0.00	2.00
SED62492	750462	2086972.37	Sediment	0.00	0.50
SED62492	750462	2086972.37	Sediment	0.00	1.42
SED62592	750641.12	2087367.5	Sediment	0.00	0.50

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Location	Northing	Easting	Media	Starting Depth (ft)	Ending Depth (ft)
SED62592	750641.12	2087367.5	Sediment	0.00	2.00
SED62692	750600.37	2087265.25	Sediment	0.00	0.33
SED62692	750600.37	2087265.25	Sediment	0.00	0.50
SED62792	750636.87	2087499.25	Sediment	0.00	0.50
SED62892	750625.5	2087484.87	Sediment	0.00	0.50
SED62892	750625.5	2087484.87	Sediment	0.00	1.83
SED62992	750634.06	2087193.62	Sediment	0.00	0.50
SED62992	750634.06	2087193.62	Sediment	0.00	1.08
SED63092	750757.75	2087852.75	Sediment	0.00	1.33
SED63192	750832.93	2087814.12	Sediment	0.00	1.33
SED63292	750767.25	2087809.25	Sediment	0.00	0.50
SED63292	750767.25	2087809.25	Sediment	0.00	2.00
SED63292	750767.25	2087809.25	Sediment	0.00	2.58
SED63392	750792	2087811.87	Sediment	0.00	0.50
SED63392	750792	2087811.87	Sediment	0.00	2.00
SED63392	750792	2087811.87	Sediment	0.00	2.67
SED63492	750772.25	2087667	Sediment	0.00	0.67
SED66092	750589	2087209	Sediment	0.00	0.17
SED66292	750744	2087623	Sediment	0.00	0.17
SED66392	750778	2087651	Sediment	0.00	0.17
SEDB1	750559.875	2087120	Sediment	0.00	0.50
SEDB2	750667.313	2087514	Sediment	0.00	0.50
SEDB3	750813.31	2087862.12	Sediment	0.00	0.50

14.0 DATA QUALITY ASSESSMENT

The DQOs for this project are described in the IASAP (DOE 2001). All DQOs for this project were achieved based on the following:

- Regulatory agency-approved sampling program design in accordance with the IASAP (DOE 2001) and IABZSAP (DOE 2004c);
- Collection of samples in accordance with the sampling design;
- Implementation of remediation activities in accordance with ER RSOP Notification #04-11 (DOE 2004a); and
- Results of the DQA, as described in the following sections.

14.1 Data Quality Assessment Process

The DQA process ensures that the type, quantity, and quality of environmental data used in decision making are defensible, and is based on the following guidance and requirements:

- EPA, 1994a, Guidance for the Data Quality Objective Process, QA/G-4;
- EPA, 1998, Guidance for the Data Quality Assessment Process, Practical Methods for Data Analysis, QA/G-9; and

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- DOE, 1999, Quality Assurance, Order 414.1A.

Verification and validation (V&V) of data are the primary components of the DQA. The final data are compared with original project DQOs and evaluated with respect to project decisions; uncertainty within the decisions; and quality criteria required for the data, specifically precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS). Validation criteria are consistent with the following RFETS-specific documents and industry guidelines:

- EPA, 1994b, USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, 540/R-94/012;
- EPA, 1994c, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, 540/R-94/013;
- Kaiser-Hill Company, L.L.C. (K-H), 2002a, General Guidelines for Data Verification and Validation, DA-GR01-v2, October;
- K-H, 2002b, V&V Guidelines for Isotopic Determinations by Alpha Spectrometry, DA-RC01-v2, October;
- K-H, 2002c, V&V Guidelines for Volatile Organics, DA-SS01-v3, October;
- K-H, 2002d, V&V Guidelines for Semivolatile Organics, DA-SS02-v3, October;
- K-H, 2002e, V&V Guidelines for Metals, DA-SS05-v3, October; and
- Lockheed-Martin, 1997, Evaluation of Radiochemical Data Usability, ES/ER/MS-5.

This report will be submitted to the CERCLA AR for permanent storage 30 days after being provided to Colorado Department of Health and Environment (CDPHE) and/or EPA.

14.2 Verification and Validation of Results

Verification ensures that data produced and used by the project are documented and traceable in accordance with quality requirements. Validation consists of a technical review of all data that directly support the project decisions so that any limitations of the data relative to project goals are delineated and the associated data are qualified accordingly. The V&V process defines the criteria that constitute data quality, namely PARCCS parameters. Data traceability and archival are also addressed. V&V criteria include the following:

- Chain-of-custody;
- Preservation and hold times;
- Instrument calibrations;
- Preparation blanks;

- Interference check samples (metals);
- Matrix spikes/matrix spike duplicates (MS/MSDs);
- Laboratory control samples (LCSs);
- Field duplicate measurements;
- Chemical yield (radiochemistry);
- Required quantitation limits/minimum detectable activities (sensitivity of chemical and radiochemical measurements, respectively); and
- Sample analysis and preparation methods.

Evaluation of V&V criteria ensures that PARCCS parameters are satisfactory (that is, within tolerances acceptable to the project). Satisfactory V&V of laboratory quality controls are captured through application of validation "flags" or qualifiers to individual records.

Raw hard-copy data (for example, individual analytical data packages) are currently filed by report identification number (RIN) and maintained by K-H Analytical Services Division (ASD). Older hard copies may reside in the Federal Center in Lakewood, Colorado. Electronic data are stored in the RFETS SWD. Standardized real and QC data are included on the enclosed CD.

14.2.1 Accuracy

The following measures of accuracy were evaluated:

- LCSs;
- Surrogates;
- Field blanks; and
- Sample MSs.

Results are compared to method requirements and project goals. The results of these comparisons are summarized for RFCA COCs where the results could impact project decisions. Particular attention is paid to those values near ALs when QC results could indicate unacceptable levels of uncertainty for decision-making purposes.

Laboratory Control Sample Evaluation

As indicated in Table 9, LCS analyses were run for all methods except gamma spectroscopy. When the In-Situ Counting System (ISOCS) technique is used for gamma spectroscopy, an internal standard approach is used instead of LCSs. The on-site laboratory that performs gamma spectroscopy is therefore not required to provide LCS data.

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Table 9
LCS Summary

Test Method	Laboratory Batch	LCS Run?
Alpha spectroscopy	4315478	Yes
Alpha spectroscopy	4315480	Yes
Alpha spectroscopy	4315483	Yes
Alpha spectroscopy	4315563	Yes
Alpha spectroscopy	4315569	Yes
Alpha spectroscopy	4315571	Yes
Alpha spectroscopy	4317491	Yes
Alpha spectroscopy	4317528	Yes
Alpha spectroscopy	4317532	Yes
Alpha spectroscopy	4336464	Yes
Alpha spectroscopy	4336467	Yes
Alpha spectroscopy	4336470	Yes
Alpha spectroscopy	4363290	Yes
Alpha spectroscopy	4363293	Yes
Alpha spectroscopy	4363295	Yes
Alpha spectroscopy	5003444	Yes
Alpha spectroscopy	5003445	Yes
Alpha spectroscopy	5003446	Yes
Alpha spectroscopy	5006393	Yes
Alpha spectroscopy	5006397	Yes
Alpha spectroscopy	5006410	Yes
Alpha spectroscopy	5017498	Yes
Alpha spectroscopy	5017499	Yes
Alpha spectroscopy	5017500	Yes
Alpha spectroscopy	5020422	Yes
Alpha spectroscopy	5020423	Yes
Alpha spectroscopy	5020426	Yes
Alpha spectroscopy	5028426	Yes
Alpha spectroscopy	5028428	Yes
Alpha spectroscopy	5028432	Yes
Alpha spectroscopy	5031450	Yes
Alpha spectroscopy	5031459	Yes
Alpha spectroscopy	5031460	Yes
Alpha spectroscopy	5038375	Yes
Alpha spectroscopy	5038377	Yes
Alpha spectroscopy	5038379	Yes
Alpha spectroscopy	5052462	Yes
Alpha spectroscopy	5052466	Yes
Alpha spectroscopy	5052471	Yes
Alpha spectroscopy	5054408	Yes
Alpha spectroscopy	5054413	Yes
Alpha spectroscopy	5054416	Yes

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Test Method	Laboratory Batch	LCS Run?
Alpha spectroscopy	5055452	Yes
Alpha spectroscopy	5055454	Yes
Alpha spectroscopy	5055455	Yes
Alpha spectroscopy	5061276	Yes
Alpha spectroscopy	5061278	Yes
Alpha spectroscopy	5061281	Yes
Alpha spectroscopy	5063465	Yes
Alpha spectroscopy	5063466	Yes
Alpha spectroscopy	5063467	Yes
Alpha spectroscopy	5066480	Yes
Alpha spectroscopy	5066485	Yes
Alpha spectroscopy	5066494	Yes
Alpha spectroscopy	5067318	Yes
Alpha spectroscopy	5067323	Yes
Alpha spectroscopy	5069439	Yes
Alpha spectroscopy	5069442	Yes
Alpha spectroscopy	5069446	Yes
Alpha spectroscopy	5070311	Yes
Alpha spectroscopy	5073364	Yes
Alpha spectroscopy	5073368	Yes
Alpha spectroscopy	5073371	Yes
Alpha spectroscopy	5073374	Yes
Alpha spectroscopy	5073375	Yes
Alpha spectroscopy	5075443	Yes
Alpha spectroscopy	5076449	Yes
Alpha spectroscopy	5076453	Yes
Alpha spectroscopy	5076455	Yes
SW-846 6010	4363216	Yes
SW-846 6010	4363604	Yes
SW-846 6010	4365400	Yes
SW-846 6010	4365453	Yes
SW-846 6010	5005087	Yes
SW-846 6010	5006212	Yes
SW-846 6010	5013467	Yes
SW-846 6010	5017116	Yes
SW-846 6010	5026500	Yes
SW-846 6010	5027146	Yes
SW-846 6010	5027417	Yes
SW-846 6010	5027591	Yes
SW-846 6010	5054626	Yes
SW-846 6010	5055148	Yes
SW-846 6010	5055561	Yes
SW-846 6010	5056442	Yes
SW-846 6010	5060508	Yes

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Test Method	Laboratory Batch	LCS Run?
SW-846 6010	5061189	Yes
SW-846 6010	5061556	Yes
SW-846 6010	5062219	Yes
SW-846 6010	5062302	Yes
SW-846 6010	5062486	Yes
SW-846 6010	5067499	Yes
SW-846 6010	5068525	Yes
SW-846 6010	5069192	Yes
SW-846 8082	4362441	Yes
SW-846 8082	4365341	Yes
SW-846 8082	5004381	Yes
SW-846 8082	5013454	Yes
SW-846 8082	5026429	Yes
SW-846 8082	5027476	Yes
SW-846 8082	5054614	Yes
SW-846 8082	5055497	Yes
SW-846 8082	5060494	Yes
SW-846 8082	5062151	Yes
SW-846 8082	5062306	Yes
SW-846 8082	5068512	Yes
SW-846 8082	5074416	Yes
SW-846 8260	5004135	Yes
SW-846 8260	5004187	Yes
SW-846 8260	5006282	Yes
SW-846 8260	5018262	Yes
SW-846 8260	5031284	Yes
SW-846 8260	5056477	Yes
SW-846 8260	5062250	Yes
SW-846 8260	5066245	Yes
SW-846 8260	5068294	Yes
SW-846 8260	5073331	Yes
SW-846 8270	4364401	Yes
SW-846 8270	5003104	Yes
SW-846 8270	5005287	Yes
SW-846 8270	5013456	Yes
SW-846 8270	5027616	Yes
SW-846 8270	5056304	Yes
SW-846 8270	5061500	Yes
SW-846 8270	5063193	Yes
SW-846 8270	5070457	Yes
SW-846 8270	5073497	Yes
SW-846 8270	5082489	Yes

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The minimum and maximum LCS results are tabulated, by chemical, for the entire project in Table 10. LCS results outside of tolerances were reviewed to determine whether a potential bias might be indicated. LCS recoveries are not indicative of matrix effects because they are not prepared using site samples. LCS results do indicate whether the laboratory may be introducing a bias in the results. Recoveries reported above the upper limit may indicate the actual sample results are less than reported. Because this is environmentally conservative, no further action is needed.

The analytes with unacceptably low recoveries were evaluated. If the highest sample result divided by the lowest LCS recovery for that analyte is less than the AL, no further action is taken because any indicated bias is not great enough to affect project decisions.

A number of SVOCs were reported with unacceptably low recoveries due to several problems encountered during laboratory analyses. Some of the low recoveries were due to analyst error. The LCS associated with a QC batch for the affected samples was not spiked with the full list of target analytes. Upon re-extraction and reanalysis, the LCS was spiked correctly and met acceptance criteria; however, the associated sample exhibited four of the six surrogate recoveries outside the QC control limits, biased low. Additional corrective action could not be initiated due to insufficient sample volume; therefore, the original analyses were reported. In addition, a number of samples exhibited surrogate recoveries outside the QC limits. Upon re-extraction and reanalysis, surrogate recoveries were 100 percent in control; however, sample holding times had been exceeded.

Table 10
LCS Evaluation Summary

Test Method	CAS No.	Analyte	Minimum Percent Recovery	Maximum Percent Recovery
SW-846 8260	71-55-6	1,1,1-Trichloroethane	89	116
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	76	110
SW-846 8260	79-00-5	1,1,2-Trichloroethane	81	107
SW-846 8260	75-34-3	1,1-Dichloroethane	86	100
SW-846 8260	75-35-4	1,1-Dichloroethene	85	112
SW-846 8270	120-82-1	1,2,4-Trichlorobenzene	59	87
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	78	135.3
SW-846 8260	95-50-1	1,2-Dichlorobenzene	84	113.8
SW-846 8260	107-06-2	1,2-Dichloroethane	86	121
SW-846 8260	78-87-5	1,2-Dichloropropane	87	100
SW-846 8260	106-46-7	1,4-Dichlorobenzene	82	118.8
SW-846 8270	95-95-4	2,4,5-Trichlorophenol	0	101
SW-846 8270	88-06-2	2,4,6-Trichlorophenol	0	99
SW-846 8270	120-83-2	2,4-Dichlorophenol	0	91
SW-846 8270	105-67-9	2,4-Dimethylphenol	0	85
SW-846 8270	51-28-5	2,4-Dinitrophenol	0	81
SW-846 8270	121-14-2	2,4-Dinitrotoluene	62	97
SW-846 8270	606-20-2	2,6-Dinitrotoluene	0	98
SW-846 8260	78-93-3	2-Butanone	75.44	109

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Test Method	CAS No.	Analyte	Minimum Percent Recovery	Maximum Percent Recovery
SW-846 8270	91-58-7	2-Chloronaphthalene	0	93
SW-846 8270	95-57-8	2-Chlorophenol	60	103
SW-846 8270	91-57-6	2-Methylnaphthalene	0	91
SW-846 8270	95-48-7	2-Methylphenol	0	84
SW-846 8270	88-74-4	2-Nitroaniline	0	87
SW-846 8270	91-94-1	3,3'-Dichlorobenzidine	0	68
SW-846 8270	534-52-1	4,6-Dinitro-2-methylphenol	0	87
SW-846 8270	106-47-8	4-Chloroaniline	0	66
SW-846 8260	108-10-1	4-Methyl-2-pentanone	67.41	103
SW-846 8270	106-44-5	4-Methylphenol	0	86
SW-846 8270	100-02-7	4-Nitrophenol	66	100
SW-846 8270	83-32-9	Acenaphthene	61	90
SW-846 8260	67-64-1	Acetone	67	116
SW-846 6010	7429-90-5	Aluminum	88	99
SW-846 8270	120-12-7	Anthracene	0	89
SW-846 6010	7440-36-0	Antimony	81	94
SW-846 8082	12674-11-2	Aroclor-1016	75	120
SW-846 8082	11096-82-5	Aroclor-1260	73	111
SW-846 6010	7440-38-2	Arsenic	84	93
SW-846 6010	7440-39-3	Barium	89	98
SW-846 8260	71-43-2	Benzene	89	104
SW-846 8270	56-55-3	Benzo(a)anthracene	0	85
SW-846 8270	50-32-8	Benzo(a)pyrene	0	86
SW-846 8270	205-99-2	Benzo(b)fluoranthene	0	87
SW-846 8270	207-08-9	Benzo(k)fluoranthene	0	99
SW-846 8270	65-85-0	Benzoic Acid	0	61
SW-846 8270	100-51-6	Benzyl Alcohol	0	77
SW-846 6010	7440-41-7	Beryllium	90	101
SW-846 8270	111-44-4	bis(2-Chloroethyl)ether	0	79
SW-846 8270	39638-32-9	bis(2-Chloroisopropyl)ether	0	81
SW-846 8270	117-81-7	bis(2-Ethylhexyl)phthalate	0	91
SW-846 8260	75-27-4	Bromodichloromethane	86.82	114
SW-846 8260	75-25-2	Bromoform	81.67	127
SW-846 8260	74-83-9	Bromomethane	71.53	105
SW-846 8270	85-68-7	Butylbenzylphthalate	0	90
SW-846 6010	7440-43-9	Cadmium	84	96
SW-846 8260	75-15-0	Carbon Disulfide	44	143
SW-846 8260	56-23-5	Carbon Tetrachloride	89	124
SW-846 8260	108-90-7	Chlorobenzene	85	111
SW-846 8260	75-00-3	Chloroethane	81	117
SW-846 8260	67-66-3	Chloroform	91	111
SW-846 8260	74-87-3	Chloromethane	52	111
SW-846 6010	7440-47-3	Chromium	85	98

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Test Method	CAS No.	Analyte	Minimum Percent Recovery	Maximum Percent Recovery
SW-846 8270	218-01-9	Chrysene	0	85
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	86.94	110
SW-846 6010	7440-48-4	Cobalt	83	95
SW-846 6010	7440-50-8	Copper	89	101
SW-846 8270	84-74-2	Di-n-butylphthalate	0	92
SW-846 8270	117-84-0	Di-n-octylphthalate	0	90
SW-846 8270	53-70-3	Dibenz(a,h)anthracene	0	83
SW-846 8270	132-64-9	Dibenzofuran	0	100
SW-846 8260	124-48-1	Dibromochloromethane	87	122
SW-846 8270	84-66-2	Diethylphthalate	0	92
SW-846 8270	131-11-3	Dimethylphthalate	0	94
SW-846 8260	100-41-4	Ethylbenzene	87	115.4
SW-846 8270	206-44-0	Fluoranthene	0	88
SW-846 8270	86-73-7	Fluorene	0	91
SW-846 8270	118-74-1	Hexachlorobenzene	0	98
SW-846 8260	87-68-3	Hexachlorobutadiene	85	142.1
SW-846 8270	87-68-3	Hexachlorobutadiene	0	90
SW-846 8270	77-47-4	Hexachlorocyclopentadiene	0	104
SW-846 8270	67-72-1	Hexachloroethane	0	82
SW-846 8270	193-39-5	Indeno(1,2,3-cd)pyrene	0	89
SW-846 6010	7439-89-6	Iron	93	106
SW-846 8270	78-59-1	Isophorone	0	84
SW-846 6010	7439-92-1	Lead	85	97
SW-846 6010	7439-93-2	Lithium	89	102
SW-846 6010	7439-96-5	Manganese	88	98
SW-846 6010	7439-97-6	Mercury	93	111
SW-846 8260	75-09-2	Methylene chloride	59	101
SW-846 6010	7439-98-7	Molybdenum	83	98
SW-846 8270	86-30-6	n-Nitrosodiphenylamine	0	101
SW-846 8270	621-64-7	n-Nitrosodipropylamine	60	84
SW-846 8270	91-20-3	Naphthalene	0	80
SW-846 8260	91-20-3	Naphthalene	77	113.1
SW-846 6010	7440-02-0	Nickel	86	96
SW-846 8270	98-95-3	Nitrobenzene	0	84
SW-846 8270	87-86-5	Pentachlorophenol	40	78
SW-846 8270	108-95-2	Phenol	63	107
SW-846 8270	129-00-0	Pyrene	62	86
SW-846 6010	7782-49-2	Selenium	82	92
SW-846 6010	7440-22-4	Silver	88	99
SW-846 6010	7440-24-6	Strontium	89	97
SW-846 8260	100-42-5	Styrene	88	110
SW-846 8260	127-18-4	Tetrachloroethene	88	126
SW-846 6010	7440-31-5	Tin	81	96

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Test Method	CAS No.	Analyte	Minimum Percent Recovery	Maximum Percent Recovery
SW-846 8260	108-88-3	Toluene	81	113.5
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	83	116
SW-846 8260	79-01-6	Trichloroethene	84	119
SW-846 6010	11-09-6	Uranium, Total	92	102
SW-846 6010	7440-62-2	Vanadium	86	98
SW-846 8260	75-01-4	Vinyl chloride	60	103
SW-846 8260	1330-20-7	Xylene	90	116.6
SW-846 6010	7440-66-6	Zinc	86	96

Surrogate Evaluation

The frequency of surrogate measurements, relative to each laboratory batch, is given in Table 11. Surrogate frequency was adequate based on at least one set per sample. The minimum and maximum surrogate results are also tabulated, by chemical, for the entire project. Surrogates are added to every sample, and, therefore, surrogate recoveries only impact individual samples. Unacceptable surrogate recoveries can indicate potential matrix effects. The highest and lowest surrogate recoveries for this project were reviewed, and results did not affect project decisions. All organic compounds with surrogate recoveries had concentrations less than RLs.

Table 11
Surrogate Recovery Summary

VOC Surrogate Recoveries				
Number of Samples	Analyte	Minimum Recovery	Maximum Recovery	Unit
15	4-Bromofluorobenzene	85	107	%REC
15	Deuterated 1,2-dichloroethane	73	118	%REC
15	Deuterated Toluene	91	109	%REC
SVOC Surrogate Recoveries				
Number of Samples	Analyte	Minimum Recovery	Maximum Recovery	Unit
13	2-Fluorobiphenyl	51	83	%REC
13	2-Fluorophenol	53	89	%REC
13	Deuterated Nitrobenzene	52	82	%REC
13	p-Terphenyl-d14	53	105	%REC

% REC – percent recovery

Field Blank Evaluation

Results of the field blank analyses are given in Table 12. Detectable amounts of contaminants within the blanks, which could indicate possible cross-contamination of samples, are evaluated if the same contaminant is detected in the associated real samples. When the real result is less than 10 times the blank result for laboratory contaminants and 5 times the result for nonlaboratory contaminants, the real result is eliminated. None of the

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chemicals were detected in the blanks at concentrations greater than one-tenth the AL. Therefore, blank contamination did not adversely impact project decisions.

Table 12
Field Blank Summary

Laboratory	CAS No.	Analyte	Sample QC Code	Detected Result	Unit
URS	78-93-3	2-Butanone	TB	72	ug/L
URS	15117-96-1	Uranium-235	FB	0.18	pCi/g
URS	15117-96-1	Uranium-235	RNS	0.084	pCi/g
URS	7440-61-1	Uranium-238	FB	2.4	pCi/g
URS	7440-61-1	Uranium-238	RNS	2.88	pCi/g

Field blank (EB = equipment, FB = field, RNS = rinse, TB = trip)
results greater than detection limits (not "U" qualified).

Sample Matrix Spike Evaluation

The minimum and maximum MS results are summarized by chemical for the entire project in Table 13. Organic analytes with unacceptably low recoveries resulted in a review of the LCS recoveries. According to the EPA data validation guidelines (EPA 1994b), if organic MS recoveries are low, the data reviewer may use the MS and MSD results in conjunction with other QC criteria. For this project, the LCS recoveries were checked, and these checks indicate no decisions were impacted for organic analytes. For inorganics, the associated maximum sample results were divided by the lowest percent recovery for each analyte. If the resulting number was less than the AL, decisions were not impacted, and no action was taken. For this project, all results were acceptable. Low recoveries for metals did not affect project decisions as the associated WRW ALs are at least three times greater than the highest sample result (Table 3).

Table 13
Sample MS Evaluation Summary

Test Method	CAS No.	Analyte	Minimum Percent Recovery	Maximum Percent Recovery	No. of Samples	No. of Lab Batches
SW-846 8260	71-55-6	1,1,1-Trichloroethane	77	100.6	5	5
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	16	99	5	5
SW-846 8260	79-00-5	1,1,2-Trichloroethane	79	91.36	5	5
SW-846 8260	75-34-3	1,1-Dichloroethane	77	102	5	5
SW-846 8260	75-35-4	1,1-Dichloroethene	86	105.6	5	5
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	47	92	5	5
SW-846 8270	120-82-1	1,2,4-Trichlorobenzene	55	79	5	5
SW-846 8260	95-50-1	1,2-Dichlorobenzene	63	89	5	5
SW-846 8260	107-06-2	1,2-Dichloroethane	79	102.5	5	5
SW-846 8260	78-87-5	1,2-Dichloropropane	79	103.9	5	5
SW-846 8260	106-46-7	1,4-Dichlorobenzene	63	91	5	5
SW-846 8270	95-95-4	2,4,5-Trichlorophenol	63	89	5	5

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Test Method	CAS No.	Analyte	Minimum Percent Recovery	Maximum Percent Recovery	No. of Samples	No. of Lab Batches
SW-846 8270	88-06-2	2,4,6-Trichlorophenol	60	88	5	5
SW-846 8270	120-83-2	2,4-Dichlorophenol	59	81	5	5
SW-846 8270	105-67-9	2,4-Dimethylphenol	58	75	5	5
SW-846 8270	51-28-5	2,4-Dinitrophenol	43	75	5	5
SW-846 8270	121-14-2	2,4-Dinitrotoluene	70	87	5	5
SW-846 8270	606-20-2	2,6-Dinitrotoluene	66	93	5	5
SW-846 8260	78-93-3	2-Butanone	79	101.8	5	5
SW-846 8270	91-58-7	2-Chloronaphthalene	59	81	5	5
SW-846 8270	95-57-8	2-Chlorophenol	59	81	5	5
SW-846 8270	91-57-6	2-Methylnaphthalene	61	83	5	5
SW-846 8270	95-48-7	2-Methylphenol	58	77	5	5
SW-846 8270	88-74-4	2-Nitroaniline	65	75	5	5
SW-846 8270	91-94-1	3,3'-Dichlorobenzidine	30	62	5	5
SW-846 8270	534-52-1	4,6-Dinitro-2-methylphenol	55	82	5	5
SW-846 8270	106-47-8	4-Chloroaniline	44	52	5	5
SW-846 8260	108-10-1	4-Methyl-2-pentanone	78	114.9	5	5
SW-846 8270	106-44-5	4-Methylphenol	60	78	5	5
SW-846 8270	100-02-7	4-Nitrophenol	60	84	5	5
SW-846 8270	83-32-9	Acenaphthene	62	80	5	5
SW-846 8260	67-64-1	Acetone	77.71	99	5	5
SW-846 6010	7429-90-5	Aluminum	3950	8620	11	11
SW-846 8270	120-12-7	Anthracene	64	82	5	5
SW-846 6010	7440-36-0	Antimony	30	42	11	11
SW-846 8082	12674-11-2	Aroclor-1016	64	114	5	5
SW-846 8082	11096-82-5	Aroclor-1260	76	154	5	5
SW-846 6010	7440-38-2	Arsenic	80	90	11	11
SW-846 6010	7440-39-3	Barium	0	118	11	11
SW-846 8260	71-43-2	Benzene	78	102.3	5	5
SW-846 8270	56-55-3	Benzo(a)anthracene	58	82	5	5
SW-846 8270	50-32-8	Benzo(a)pyrene	54	79	5	5
SW-846 8270	205-99-2	Benzo(b)fluoranthene	54	81	5	5
SW-846 8270	207-08-9	Benzo(k)fluoranthene	56	84	5	5
SW-846 8270	65-85-0	Benzoic Acid	0	52	5	5
SW-846 8270	100-51-6	Benzyl Alcohol	57	71	5	5
SW-846 6010	7440-41-7	Beryllium	89	101	11	11
SW-846 8270	111-44-4	bis(2-Chloroethyl)ether	53	73	5	5
SW-846 8270	39638-32-9	bis(2-Chloroisopropyl)ether	58	67	5	5
SW-846 8270	117-81-7	bis(2-Ethylhexyl)phthalate	0	174	5	5
SW-846 8260	75-27-4	Bromodichloromethane	80	107.2	5	5
SW-846 8260	75-25-2	Bromoform	78	102.5	5	5
SW-846 8260	74-83-9	Bromomethane	75	133.8	5	5
SW-846 8270	85-68-7	Butylbenzylphthalate	55	76	5	5
SW-846 6010	7440-43-9	Cadmium	81	127	11	11

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Test Method	CAS No.	Analyte	Minimum Percent Recovery	Maximum Percent Recovery	No. of Samples	No. of Lab Batches
SW-846 8260	75-15-0	Carbon Disulfide	58	76	5	5
SW-846 8260	56-23-5	Carbon Tetrachloride	74	99.54	5	5
SW-846 8260	108-90-7	Chlorobenzene	73	93	5	5
SW-846 8260	75-00-3	Chloroethane	79	107.1	5	5
SW-846 8260	67-66-3	Chloroform	80	99.93	5	5
SW-846 8260	74-87-3	Chloromethane	76	99.59	5	5
SW-846 6010	7440-47-3	Chromium	99	151	11	11
SW-846 8270	218-01-9	Chrysene	56	76	5	5
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	77	103.7	5	5
SW-846 6010	7440-48-4	Cobalt	79	91	11	11
SW-846 6010	7440-50-8	Copper	57	112	11	11
SW-846 8270	84-74-2	Di-n-butylphthalate	64	86	5	5
SW-846 8270	117-84-0	Di-n-octylphthalate	57	79	5	5
SW-846 8270	53-70-3	Dibenz(a,h)anthracene	51	91	5	5
SW-846 8270	132-64-9	Dibenzofuran	65	87	5	5
SW-846 8260	124-48-1	Dibromochloromethane	80	95.77	5	5
SW-846 8270	84-66-2	Diethylphthalate	67	84	5	5
SW-846 8270	131-11-3	Dimethylphthalate	64	87	5	5
SW-846 8260	100-41-4	Ethylbenzene	75	97	5	5
SW-846 8270	206-44-0	Fluoranthene	61	88	5	5
SW-846 8270	86-73-7	Fluorene	65	82	5	5
SW-846 8270	118-74-1	Hexachlorobenzene	62	91	5	5
SW-846 8260	87-68-3	Hexachlorobutadiene	34	88	5	5
SW-846 8270	87-68-3	Hexachlorobutadiene	58	80	5	5
SW-846 8270	77-47-4	Hexachlorocyclopentadiene	24	83	5	5
SW-846 8270	67-72-1	Hexachloroethane	58	74	5	5
SW-846 8270	193-39-5	Indeno(1,2,3-cd)pyrene	51	90	5	5
SW-846 6010	7439-89-6	Iron	0	5500	11	11
SW-846 8270	78-59-1	Isophorone	60	72	5	5
SW-846 6010	7439-92-1	Lead	82	94	11	11
SW-846 6010	7439-93-2	Lithium	90	104	11	11
SW-846 6010	7439-96-5	Manganese	0	198	11	11
SW-846 6010	7439-97-6	Mercury	90	101	9	9
SW-846 8260	75-09-2	Methylene chloride	80	107.1	5	5
SW-846 6010	7439-98-7	Molybdenum	77	88	11	11
SW-846 8270	86-30-6	n-Nitrosodiphenylamine	72	92	5	5
SW-846 8270	621-64-7	n-Nitrosodipropylamine	61	68	5	5
SW-846 8260	91-20-3	Naphthalene	48	84	5	5
SW-846 8270	91-20-3	Naphthalene	56	73	5	5
SW-846 6010	7440-02-0	Nickel	78	95	11	11
SW-846 8270	98-95-3	Nitrobenzene	58	72	5	5
SW-846 8270	87-86-5	Pentachlorophenol	44	68	5	5
SW-846 8270	108-95-2	Phenol	58	78	5	5

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Test Method	CAS No.	Analyte	Minimum Percent Recovery	Maximum Percent Recovery	No. of Samples	No. of Lab Batches
SW-846 8270	129-00-0	Pyrene	51	78	5	5
SW-846 6010	7782-49-2	Selenium	79	90	11	11
SW-846 6010	7440-22-4	Silver	31	169	11	11
SW-846 6010	7440-24-6	Strontium	72	116	11	11
SW-846 8260	100-42-5	Styrene	73	97	5	5
SW-846 8260	127-18-4	Tetrachloroethene	70	89	5	5
SW-846 6010	7440-31-5	Tin	78	87	11	11
SW-846 8260	108-88-3	Toluene	77	91	5	5
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	77	95	5	5
SW-846 8260	79-01-6	Trichloroethene	73	130	5	5
SW-846 6010	11-09-6	Uranium, Total	86	95	11	11
SW-846 6010	7440-62-2	Vanadium	97	157	11	11
SW-846 8260	75-01-4	Vinyl chloride	74	113.3	5	5
SW-846 8260	1330-20-7	Xylene	72	97	5	5
SW-846 6010	7440-66-6	Zinc	53	113	11	11

14.2.2 Precision

Precision is measured by evaluating both MSDs and field duplicates, as described in the following sections.

Sample Matrix Spike Duplicate Evaluation

Laboratory precision is measured through use of MSDs, as summarized in Table 14. Analytes with the highest relative percent differences (RPDs) were reviewed by comparing the highest sample result to the WRW AL. For analytes with RPDs greater than 35 percent, if the highest sample concentrations were sufficiently below the AL, no further action is needed. For this project, the review indicates decisions were not impacted.

Table 14
Sample MSD Evaluation Summary

Test Method	CAS No.	Analyte	Max RPD (%)
SW-846 8260	71-55-6	1,1,1-Trichloroethane	10.96
SW-846 8260	79-34-5	1,1,2,2-Tetrachloroethane	66.67
SW-846 8260	79-00-5	1,1,2-Trichloroethane	16.56
SW-846 8260	75-34-3	1,1-Dichloroethane	10.96
SW-846 8260	75-35-4	1,1-Dichloroethene	8.48
SW-846 8270	120-82-1	1,2,4-Trichlorobenzene	18.18
SW-846 8260	120-82-1	1,2,4-Trichlorobenzene	33.01
SW-846 8260	95-50-1	1,2-Dichlorobenzene	28.10
SW-846 8260	107-06-2	1,2-Dichloroethane	10.67
SW-846 8260	78-87-5	1,2-Dichloropropane	12.08
SW-846 8260	106-46-7	1,4-Dichlorobenzene	31.93
SW-846 8270	95-95-4	2,4,5-Trichlorophenol	8.33

Test Method	CAS No.	Analyte	Max RPD (%)
SW-846 8270	88-06-2	2,4,6-Trichlorophenol	8.70
SW-846 8270	120-83-2	2,4-Dichlorophenol	10.71
SW-846 8270	105-67-9	2,4-Dimethylphenol	11.20
SW-846 8270	51-28-5	2,4-Dinitrophenol	32.56
SW-846 8270	121-14-2	2,4-Dinitrotoluene	7.30
SW-846 8270	606-20-2	2,6-Dinitrotoluene	9.09
SW-846 8260	78-93-3	2-Butanone	15.58
SW-846 8270	91-58-7	2-Chloronaphthalene	14.63
SW-846 8270	95-57-8	2-Chlorophenol	16.39
SW-846 8270	91-57-6	2-Methylnaphthalene	16.13
SW-846 8270	95-48-7	2-Methylphenol	14.04
SW-846 8270	88-74-4	2-Nitroaniline	8.82
SW-846 8270	91-94-1	3,3'-Dichlorobenzidine	9.52
SW-846 8270	534-52-1	4,6-Dinitro-2-methylphenol	24.49
SW-846 8270	106-47-8	4-Chloroaniline	10.75
SW-846 8260	108-10-1	4-Methyl-2-pentanone	19.75
SW-846 8270	106-44-5	4-Methylphenol	15.63
SW-846 8270	100-02-7	4-Nitrophenol	14.57
SW-846 8270	83-32-9	Acenaphthene	12.90
SW-846 8260	67-64-1	Acetone	21.92
SW-846 6010	7429-90-5	Aluminum	70.70
SW-846 8270	120-12-7	Anthracene	13.95
SW-846 6010	7440-36-0	Antimony	30.14
SW-846 8082	12674-11-2	Aroclor-1016	28.19
SW-846 8082	11096-82-5	Aroclor-1260	16.12
SW-846 6010	7440-38-2	Arsenic	9.52
SW-846 6010	7440-39-3	Barium	27.22
SW-846 8260	71-43-2	Benzene	10.81
SW-846 8270	56-55-3	Benzo(a)anthracene	17.32
SW-846 8270	50-32-8	Benzo(a)pyrene	22.95
SW-846 8270	205-99-2	Benzo(b)fluoranthene	21.49
SW-846 8270	207-08-9	Benzo(k)fluoranthene	20.80
SW-846 8270	65-85-0	Benzoic Acid	31.58
SW-846 8270	100-51-6	Benzyl Alcohol	17.24
SW-846 6010	7440-41-7	Beryllium	8.60
SW-846 8270	111-44-4	bis(2-Chloroethyl)ether	17.60
SW-846 8270	39638-32-9	bis(2-Chloroisopropyl)ether	6.67
SW-846 8270	117-81-7	bis(2-Ethylhexyl)phthalate	38.36
SW-846 8260	75-27-4	Bromodichloromethane	11.92
SW-846 8260	75-25-2	Bromoform	18.87
SW-846 8260	74-83-9	Bromomethane	13.48
SW-846 8270	85-68-7	Butylbenzylphthalate	21.14
SW-846 6010	7440-43-9	Cadmium	83.80
SW-846 8260	75-15-0	Carbon Disulfide	34.62
SW-846 8260	56-23-5	Carbon Tetrachloride	11.43
SW-846 8260	108-90-7	Chlorobenzene	20.29
SW-846 8260	75-00-3	Chloroethane	7.23
SW-846 8260	67-66-3	Chloroform	9.15

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Test Method	CAS No.	Analyte	Max RPD (%)
SW-846 8260	74-87-3	Chloromethane	9.41
SW-846 6010	7440-47-3	Chromium	38.37
SW-846 8270	218-01-9	Chrysene	16.39
SW-846 8260	10061-01-5	cis-1,3-Dichloropropene	14.57
SW-846 6010	7440-48-4	Cobalt	10.78
SW-846 6010	7440-50-8	Copper	19.05
SW-846 8270	84-74-2	Di-n-butylphthalate	11.76
SW-846 8270	117-84-0	Di-n-octylphthalate	11.57
SW-846 8270	53-70-3	Dibenz(a,h)anthracene	22.61
SW-846 8270	132-64-9	Dibenzofuran	13.95
SW-846 8260	124-48-1	Dibromochloromethane	14.57
SW-846 8270	84-66-2	Diethylphthalate	11.43
SW-846 8270	131-11-3	Dimethylphthalate	12.95
SW-846 8260	100-41-4	Ethylbenzene	23.19
SW-846 8270	206-44-0	Fluoranthene	24.79
SW-846 8270	86-73-7	Fluorene	11.20
SW-846 8270	118-74-1	Hexachlorobenzene	15.15
SW-846 8270	87-68-3	Hexachlorobutadiene	20.18
SW-846 8260	87-68-3	Hexachlorobutadiene	40.00
SW-846 8270	77-47-4	Hexachlorocyclopentadiene	127.73
SW-846 8270	67-72-1	Hexachloroethane	46.46
SW-846 8270	193-39-5	Indeno(1,2,3-cd)pyrene	22.61
SW-846 6010	7439-89-6	Iron	200.00
SW-846 8270	78-59-1	Isophorone	10.34
SW-846 6010	7439-92-1	Lead	13.19
SW-846 6010	7439-93-2	Lithium	3.28
SW-846 6010	7439-96-5	Manganese	200.00
SW-846 6010	7439-97-6	Mercury	6.12
SW-846 8260	75-09-2	Methylene chloride	9.15
SW-846 6010	7439-98-7	Molybdenum	3.77
SW-846 8270	86-30-6	n-Nitrosodiphenylamine	10.22
SW-846 8270	621-64-7	n-Nitrosodipropylamine	11.20
SW-846 8260	91-20-3	Naphthalene	25.81
SW-846 8270	91-20-3	Naphthalene	17.54
SW-846 6010	7440-02-0	Nickel	13.17
SW-846 8270	98-95-3	Nitrobenzene	11.97
SW-846 8270	87-86-5	Pentachlorophenol	12.00
SW-846 8270	108-95-2	Phenol	15.87
SW-846 8270	129-00-0	Pyrene	24.14
SW-846 6010	7782-49-2	Selenium	4.76
SW-846 6010	7440-22-4	Silver	135.14
SW-846 6010	7440-24-6	Strontium	28.57
SW-846 8260	100-42-5	Styrene	23.19
SW-846 8260	127-18-4	Tetrachloroethene	21.88
SW-846 6010	7440-31-5	Tin	3.77
SW-846 8260	108-88-3	Toluene	17.93
SW-846 8260	10061-02-6	trans-1,3-Dichloropropene	17.72
SW-846 8260	79-01-6	Trichloroethene	13.14

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Test Method	CAS No.	Analyte	Max RPD (%)
SW-846 6010	11-09-6	Uranium, Total	3.43
SW-846 6010	7440-62-2	Vanadium	30.57
SW-846 8260	75-01-4	Vinyl chloride	8.48
SW-846 8260	1330-20-7	Xylene	23.88
SW-846 6010	7440-66-6	Zinc	102.86

Field Duplicate Evaluation

Field duplicate results reflect sampling precision, or overall repeatability of the sampling process. The frequency of field duplicate collection should exceed 1 field duplicate per 20 real samples, or 5 percent. Table 15 indicates field duplicate frequencies were adequate for all analyses.

Table 15
Field Duplicate Sample Frequency Summary

Test Method	No. of Real Samples	No. of Duplicate Samples	% Duplicate Samples
Alpha spectroscopy	46	15	32.61%
Gamma spectroscopy	258	17	6.59%
SW-846 6010	15	2	13.33%
SW-846 8082	15	2	13.33%
SW-846 8260	15	2	13.33%
SW-846 8270	15	2	13.33%

The field duplicate RPD values indicate how much variation exists in the field duplicate analyses. EPA data validation guidelines state "there are no required review criteria for field duplicate analyses comparability" (EPA 1994b). For the DQA, the highest RPD values were reviewed (Table 16). For this project, project decisions were not impacted.

Table 16
RPD Evaluation Summary

Lab Code	Test Method	Analyte	Max RPD (%)
ESTLDEN	SW-846 8260	Acetone	40.00
ESTLDEN	SW-846 6010	Aluminum	6.90
ESTLDEN	Alpha spectroscopy	Americium-241	85.35
URS	Gamma spectroscopy	Americium-241	151.14
ESTLDEN	SW-846 6010	Arsenic	20.83
ESTLDEN	SW-846 6010	Barium	29.27
ESTLDEN	SW-846 6010	Beryllium	9.35
ESTLDEN	SW-846 6010	Cadmium	17.65
ESTLDEN	SW-846 6010	Chromium	11.54
ESTLDEN	SW-846 6010	Cobalt	34.23

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Lab Code	Test Method	Analyte	Max RPD (%)
ESTLDEN	SW-846 6010	Copper	16.22
ESTLDEN	SW-846 6010	Iron	33.33
ESTLDEN	SW-846 6010	Lead	8.70
ESTLDEN	SW-846 6010	Lithium	14.12
ESTLDEN	SW-846 6010	Manganese	47.19
ESTLDEN	SW-846 6010	Mercury	7.79
ESTLDEN	SW-846 6010	Nickel	20.41
ESTLDEN	Alpha spectroscopy	Plutonium-239/240	127.07
ESTLDEN	SW-846 6010	Strontium	8.13
ESTLDEN	SW-846 8260	Tetrachloroethene	9.52
ESTLDEN	SW-846 8260	Trichloroethene	16.75
ESTLDEN	Alpha spectroscopy	Uranium-234	22.58
ESTLDEN	Alpha spectroscopy	Uranium-238	35.54
ESTLDEN	SW-846 6010	Vanadium	10.00
ESTLDEN	SW-846 6010	Zinc	24.84

14.2.3 Completeness

Based on original project DQOs, a minimum of 25 percent of ER Program analytical (and radiological) results must be formally verified and validated. Of that percentage, no more than 10 percent of the results may be rejected, which ensures that analytical laboratory practices are consistent with quality requirements. The number and percentage of validated records (codes without "1"), the number and percentage of verified records (codes with "1"), and the percentage of rejected records for each analyte group for this project are listed in Table 17.

Sixteen records out of 2,846 validated records were rejected. The rejected records were for metals and SVOCs. However, none of rejected records affected project decisions. For this project, 5.73 percent of the analyses were validated. This is below Program requirements; however, the overall ER Program V&V goal of 25 percent is being met.

14.2.4 Sensitivity

RLs, in units of micrograms per kilogram (ug/kg) for organics, milligrams per kilogram (mg/kg) for metals, and pCi/g for radionuclides, were compared with RFCA WRW ALs. Adequate sensitivities of analytical methods were attained for all COCs that affect remediation decisions. "Adequate" sensitivity is defined as an RL less than an analyte's associated AL, typically less than one-half the AL.

14.3 Summary of Data Quality

RPDs greater than 35 percent indicate the sampling precision limits of some analytes have been exceeded. Also, the validation percentage for alpha spectroscopy is below 25 percent; however, the ER Program V&V goal of 25 percent is being met. Data collected and used for IHSS Group NE-1 (Ponds B-1, B-2, and B-3) are adequate for decision making.

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Table 17
Validation and Verification Summary

Validation Qualifier Code	Total No. of Records	No. of Alpha Spectroscopy Records	No. of Gamma Spectroscopy Records	No. of SW-846 6010 Records	No. of SW-846 8082 Records	No. of SW-846 8260 Records	No. of SW-846 8270 Records
1	4	0	0	4	0	0	0
J	5	1	0	4	0	0	0
J1	89	3	0	81	0	5	0
JB	2	0	0	0	0	2	0
JB1	23	0	0	0	0	21	2
R	2	0	0	2	0	0	0
R1	14	0	0	1	0	0	13
UJ	1	0	0	1	0	0	0
UJ1	92	0	0	17	0	21	54
V	153	14	30	16	7	34	52
V1	2461	212	744	219	98	529	659
Total	2846	230	774	345	105	612	780
Validated	163	15	30	23	7	36	52
% Validated	5.73%	6.52%	3.88%	6.67%	6.67%	5.88%	6.67%
Verified	2683	215	744	322	98	576	728
% Verified	94.27%	93.48%	96.12%	93.33%	93.33%	94.12%	93.33%
Rejected	16	0	0	3	0	0	13
% Rejected	0.56%	0.00%	0.00%	0.87%	0.00%	0.00%	1.67%

Validation codes: J, V, JB, UJ

Verification codes: 1, J1, V1, JB1, UJ1

15.0 CONCLUSIONS

Results of the accelerated action justify NFAA for IHSS Group NE-1. Justification is based on the following:

- The source area for contamination was removed All sediment in Ponds B-1, B-2, and B-3 were excavated and shipped offsite for disposal.
- All residual contaminant activities and concentrations, as determined by confirmation sampling following excavation activities, are below RFCA WRW ALs.
- Reconfiguration of Ponds B-1, B-2, and B-3 included backfilling the excavations with clean fill material and regrading to create a low-energy environment that includes oxbows, backwater eddies, meandering channels, and establishment of wetlands in each of the former ponds. The thickness of clean fill below the centerline of the flow channel varies from approximately 4 ft to 16 ft throughout the ponds. Establishment of this low-energy environment will serve to minimize erosion and the potential mobilization of residual contaminants.
- Predictions of contaminant migration based on the integration of the Water Erosion Prediction Project (WEPP) (USDA 1995) and Hydraulic Engineering Center (HEC)-6T (Thomas 1999) models are conservative. Site empirical data, however, indicate contaminant migration to be less than model predictions.

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16.0 REFERENCES

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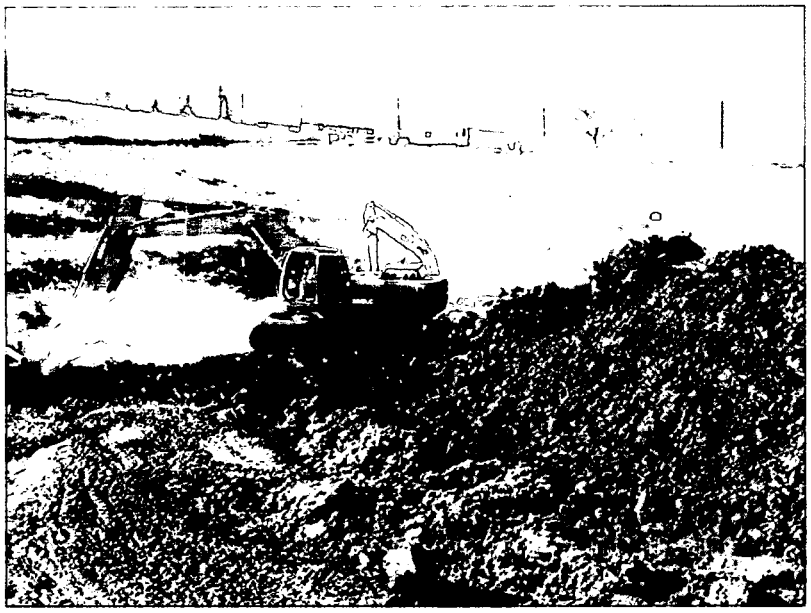
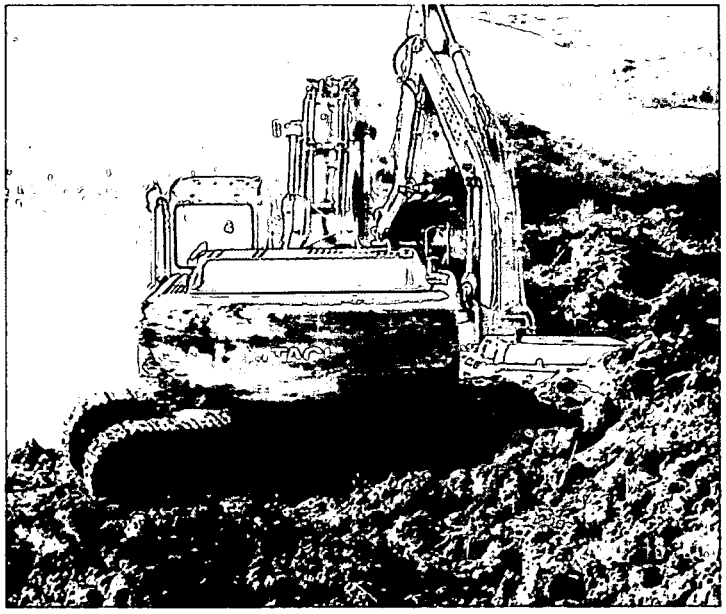
Appendix A

Project Photographs

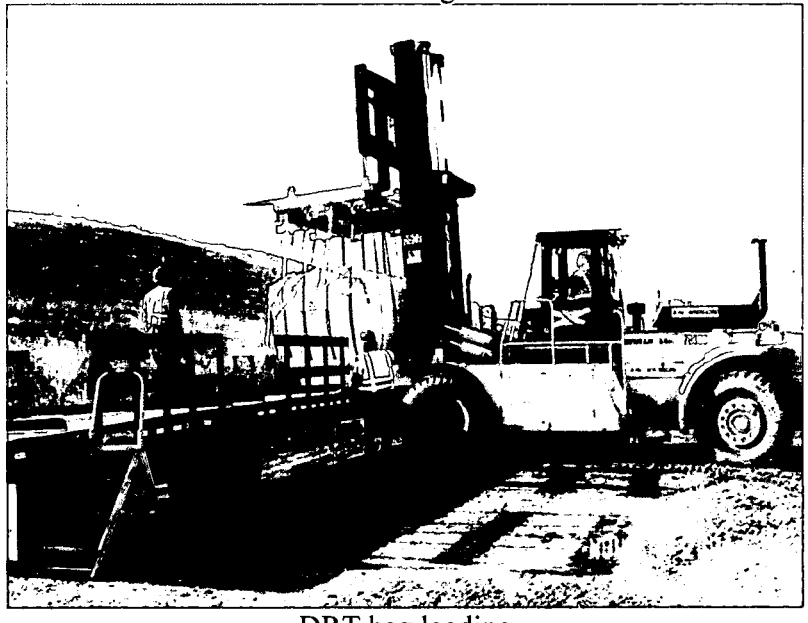


Stabilizer blending Pond B-1. View looking West

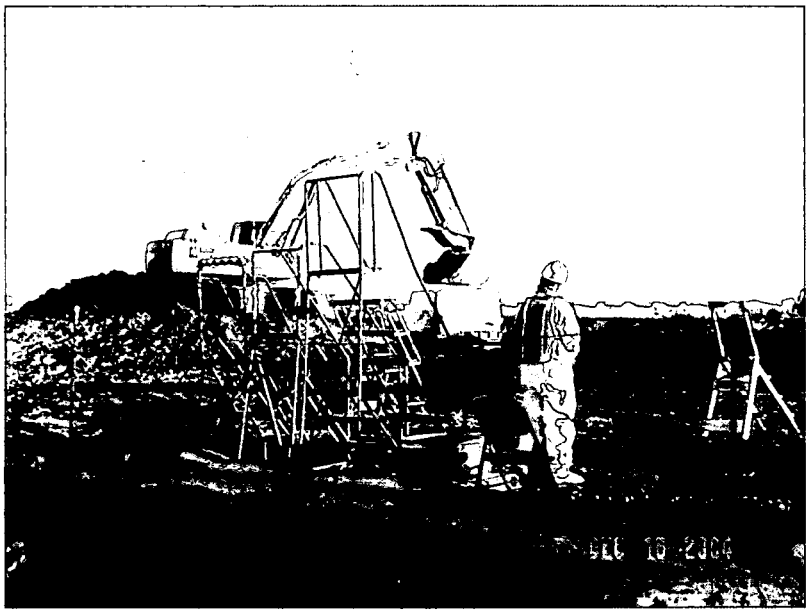


Stabilizer blending Pond B-1.

Pond B-1 excavation. View looking west.



DRT bag loading



DRT bag loading.

DRT bag loading.

DRT bag filling and loading operations.

Pond B-2 excavation. View looking northeast.

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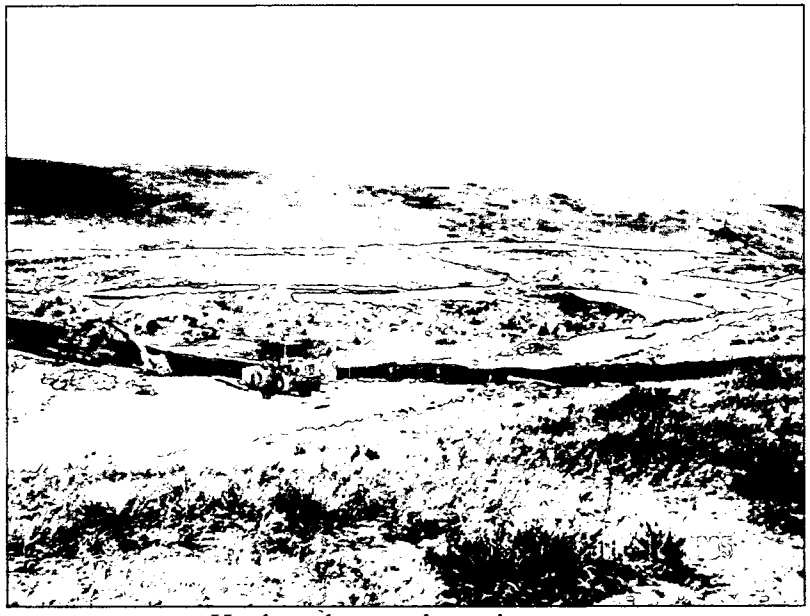
Pond B-2 excavation. View looking northeast.



Haul road to south staging area.

Pond B-1 Excavation near completion. View looking east.

Pond B-2 stabilization. View looking northeast.

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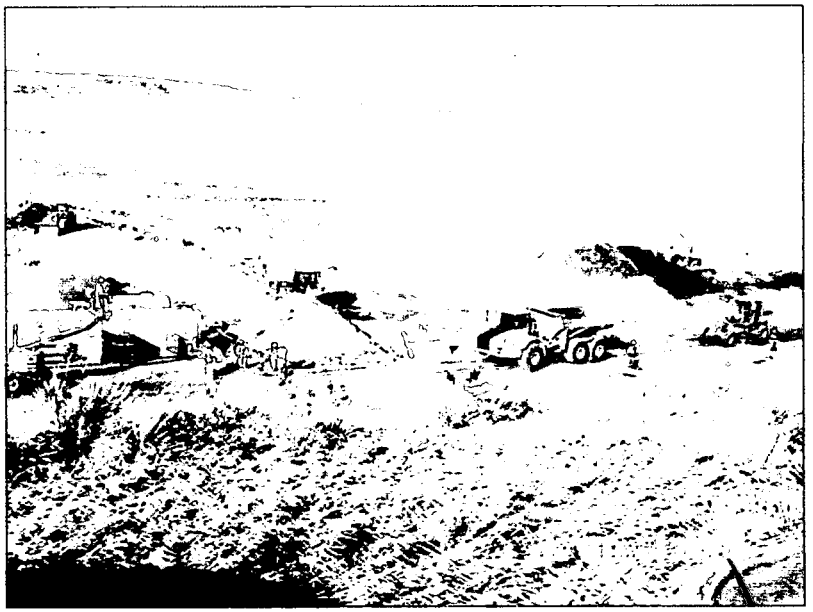
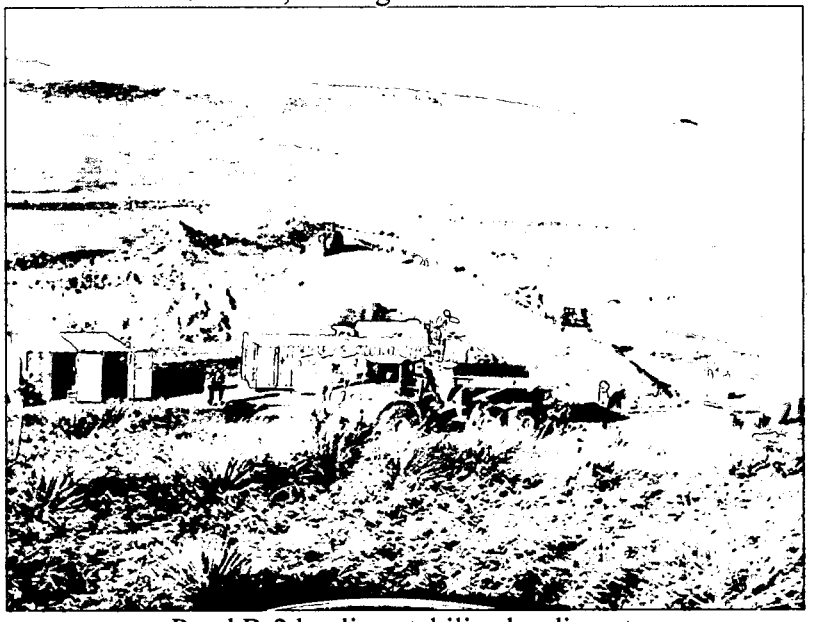
Pond B-2 stabilization. View looking northeast.



Pond B-2, loading stabilized sediment.

Pond B-2 loading stabilized sediment.



Pond B-2 hauling stabilized sediment.

121

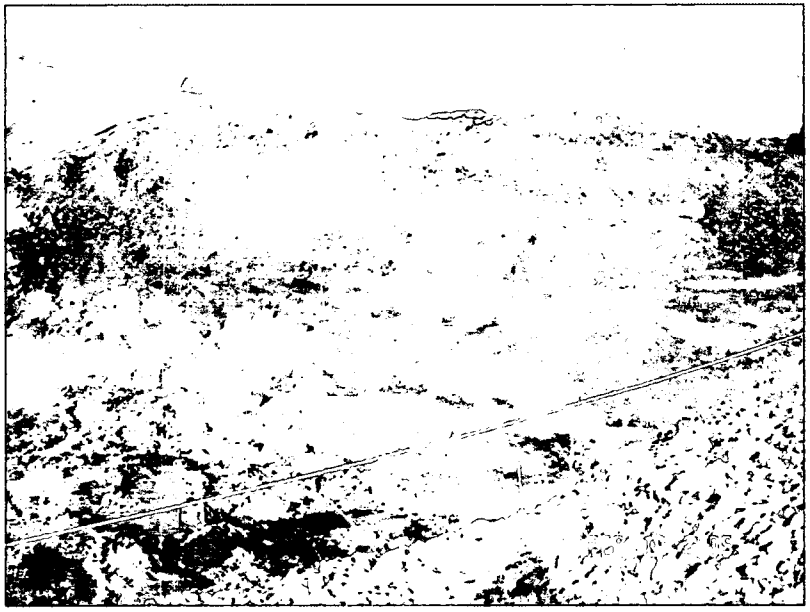
Dumping bulk sediment at B776/77 staging area.

Pond B-1, completed excavation. View looking northeast.

Pond B-2 excavation. View looking east.

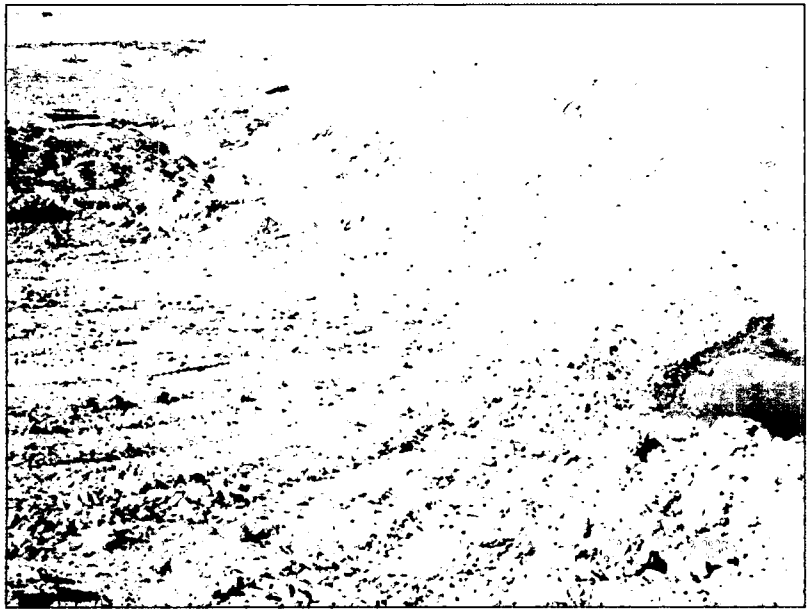
Pond B-2 excavation. Slope failure on south side of pond.

123



Pond B-2 excavation.

Backfilling begun for Pond B-1. View looking east.



Pond B-2 excavation backfilling. View looking west.

Pond B-2 backfilling. View looking northwest.

Appendix B

Correspondence

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
ER REGULATORY CONTACT RECORD

Date/Time: 3/08/05 1130

Site Contact(s): Mike Keating
Phone: 303.996.4815

Regulatory Contact: Larry Kimmel Elizabeth Pottorff
Phone: 303.312.6659 303.966.6758

Agency: USEPA CDPHE

Purpose of Contact: B Ponds - Backfill B-2 Concurrence

Discussion

The analytical results of the 50 radiological confirmation samples collected in the B-2 excavation area show no exceedance above Action Levels (see attached sampling map). The map also shows the location of the samples that were collected for off-site alpha spec. KH proposes to backfill B-2 with clean on-site soils in accordance with the COE individual 404 permit. No soil from the B Pond dams will be used as backfill in the ponds.

CH2M HILL is currently developing a backfill design for rough grading that will include wetland restoration. We will continue to use the B Ponds Erosion Control Plans.

EPA and CDPHE agree with this approach.

Contact Record Prepared By: J. Michael Keating, P.E.

Required Distribution:		Additional Distribution:
M. Aguilar, USEPA	D. Mayo, K-H RISS	
H. Ainscough, CDPHE	J. Mead, K-H ESS	
S. Bell, DOE-RFPO	S. Nesta, K-H RISS	
J. Berardini, K-H	L. Norland, K-H RISS	
B. Birk, DOE-RFPO	K. North, K-H ESS	
L. Brooks, K-H ESS	E. Pottorff, CDPHE	
L. Butler, K-H RISS	A. Primrose, K-H RISS	
G. Carnival, K-H RISS	M. Roy, DOE-RFPO	
N. Castaneda, DOE-RFPO	R. Schassburger, DOE-RFPO	
C. Deck, K-H Legal	S. Serreze, K-H RISS	
N. Demos, SSOC	D. Shelton, K-H ESS	

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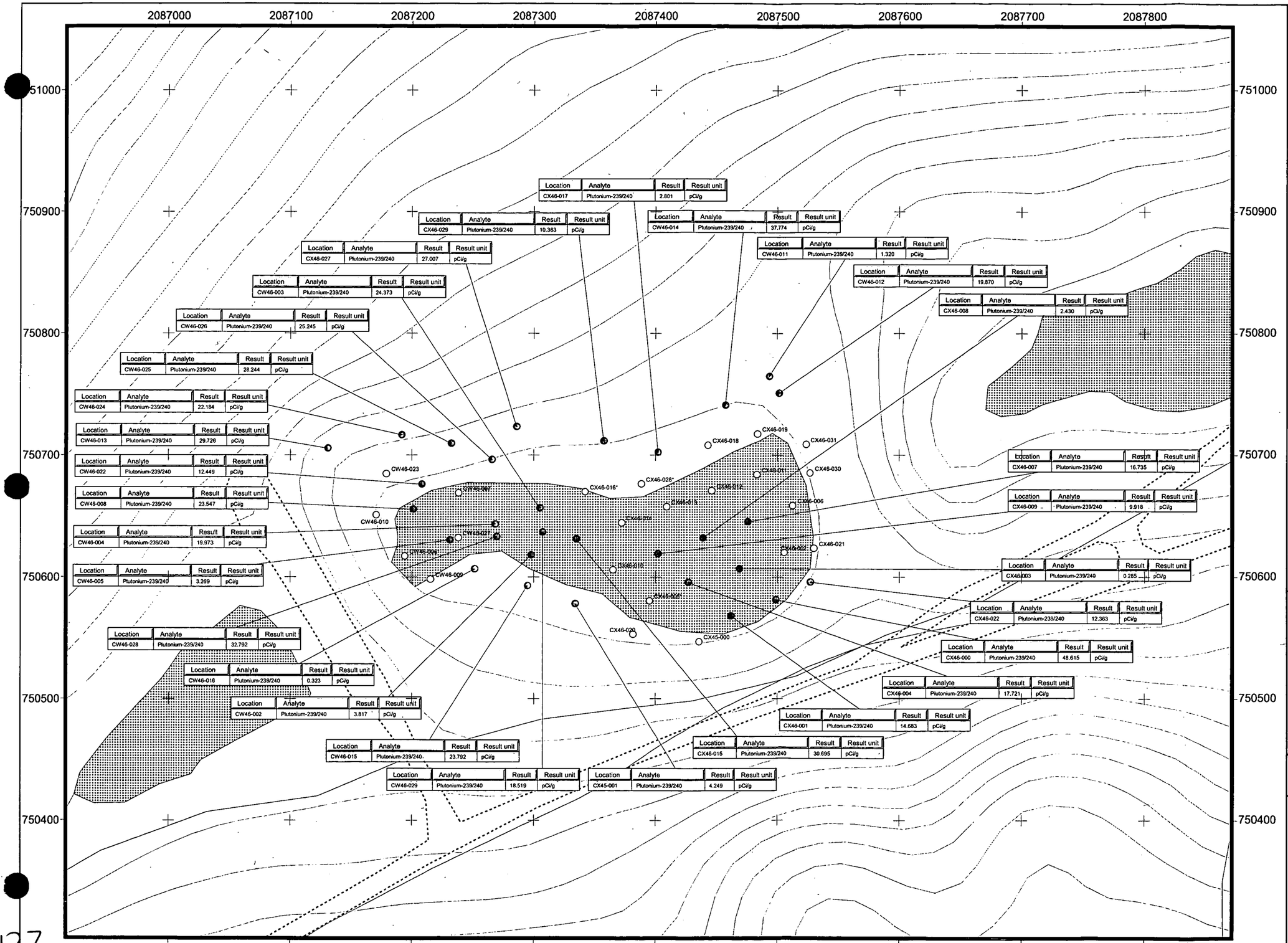
S. Gunderson, CDPHE	C. Spreng, CDPHE	_____
M. Keating, K-H RISS	S. Surovchak, DOE-RFPO	_____
G. Kleeman, USEPA	J. Walstrom, K-H RISS	_____
D. Kruchek, CDPHE	K. Wiemelt, K-H RISS	_____
J. Legare, DOE-RFPO	C. Zahm, K-H Legal	_____

Pond B-2 Confirmation Sampling Pu-239/240 Results 03-03-05



Location	Analyte	Result	Result unit
CX46-017	Plutonium-239/240	2.801	pCi/g
CX46-029	Plutonium-239/240	10.363	pCi/g
CW46-014	Plutonium-239/240	37.774	pCi/g
CX46-027	Plutonium-239/240	27.007	pCi/g
CW46-011	Plutonium-239/240	1.320	pCi/g
CW46-003	Plutonium-239/240	24.373	pCi/g
CW46-012	Plutonium-239/240	19.870	pCi/g
CW46-026	Plutonium-239/240	25.245	pCi/g
CX46-008	Plutonium-239/240	2.430	pCi/g
CW46-025	Plutonium-239/240	28.244	pCi/g
CW46-024	Plutonium-239/240	22.184	pCi/g
CW46-013	Plutonium-239/240	29.726	pCi/g
CX46-007	Plutonium-239/240	16.735	pCi/g
CW46-022	Plutonium-239/240	12.449	pCi/g
CX46-009	Plutonium-239/240	9.918	pCi/g
CW46-008	Plutonium-239/240	23.547	pCi/g
CW46-004	Plutonium-239/240	19.973	pCi/g
CX46-003	Plutonium-239/240	0.285	pCi/g
CW46-005	Plutonium-239/240	3.269	pCi/g
CX46-022	Plutonium-239/240	12.363	pCi/g
CW46-028	Plutonium-239/240	32.792	pCi/g
CX46-000	Plutonium-239/240	48.615	pCi/g
CW46-016	Plutonium-239/240	0.323	pCi/g
CX46-004	Plutonium-239/240	17.721	pCi/g
CW46-002	Plutonium-239/240	3.817	pCi/g
CX46-001	Plutonium-239/240	14.683	pCi/g
CW46-015	Plutonium-239/240	23.792	pCi/g
CX46-015	Plutonium-239/240	30.695	pCi/g
CW46-029	Plutonium-239/240	18.519	pCi/g
CX45-001	Plutonium-239/240	4.249	pCi/g

- ● Detected below WRW AL
- ○ Non-detect
- ○ Laboratory alpha spectroscopy results pending

CW46-006*
CX46-005*
CX46-016*
CX46-028*
Planned location shown, actual surveyed location pending

- Dirt Road
- Lake
- Stream
- Topography (5-ft interval)

WORKING DRAFT

N
W E
S

40 0 40 Feet

Scale = 1:825

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for:

Date: 03-03-05

KAISER•HILL COMPANY

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
ER REGULATORY CONTACT RECORD

Date/Time: 2/21/05 / 0830

Site Contact(s): Mike Keating
Phone: 303.996.4815

Regulatory Contact: Larry Kimmel Elizabeth Pottorff
Phone: 303.312.6659 303.966.6758

Agency: USEPA CDPHE

Purpose of Contact: B Ponds – Emergency Backfill B-2

Discussion

Over the previous weekend (2/19-2/20) the north and south side slopes at the east end of B-2 have become unstable. The slopes show up-slope cracks and bulging at the toe of the slope which are classic signs of a rotational failure. A geotechnical engineer from CH2M HILL has evaluated the situation and has recommended buttressing the slopes with backfill soil. This will minimize any additional soil movement.

We have collected all the confirmation samples from the east portion of the B-2 pond. The field screen results are as follows: CX46-000 at 4.75 pCi/g, CX46-002 at 0.0 pCi/g, CX46-003 at 0.0 pCi/g, CX46-008 at 0.0 pCi/g, CX46-006 and duplicate at 0.0 pCi/g, CX46-007 at 0.0 pCi/g, CX46-011 at 0.0 pCi/g, CX46-012 at 0.0 pCi/g, and CX46-013 at 0.0 pCi/g. CX45-001 at 0.0 pCi/g and CX46-001 at 1.66 pCi/g.

Due to the immediate safety hazards inherent with unstable slopes around the B-2 pond, Kaiser Hill intends to immediately backfill the lower portion of the east end of B-2 with clean on-site soil. This activity will help reduce the potential for a catastrophic slope failure.

EPA and CDPHE agrees with this approach.

Contact Record Prepared By: J. Michael Keating, P.E.

Required Distribution:

M. Aguilar, USEPA
H. Ainscough, CDPHE
S. Bell, DOE-RFPO
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B. Birk, DOE-RFPO
L. Brooks, K-H ESS
L. Butler, K-H RISS
G. Carnival, K-H RISS
D. Mayo, K-H RISS
J. Mead, K-H ESS
S. Nesta, K-H RISS
L. Norland, K-H RISS
K. North, K-H ESS
E. Pottorff, CDPHE
A. Primrose, K-H RISS
M. Roy, DOE-RFPO

Additional Distribution:

_____
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_____

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N. Castaneda, DOE-RFPO	R. Schassburger, DOE-RFPO	_____
C. Deck, K-H Legal	S. Serreze, K-H RISS	_____
N. Demos, SSOC	D. Shelton, K-H ESS	_____
S. Gunderson, CDPHE	C. Spreng, CDPHE	_____
M. Keating, K-H RISS	S. Surovchak, DOE-RFPO	_____
G. Kleeman, USEPA	J. Walstrom, K-H RISS	_____
D. Kruchek, CDPHE	K. Wiemelt, K-H RISS	_____
J. Legare, DOE-RFPO	C. Zahm, K-H Legal	_____

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
ER REGULATORY CONTACT RECORD

Date/Time:	January 21, 2005	
Site Contact(s):	Annette Primrose	Norma Castaneda
Phone:	303 966-4385	303 966-4226
	K-H RISS	DOE
Regulatory Contact:	Larry Kimmel	Elizabeth Pottorff
Phone:	303 312-6659	303 692-3429
Agency:	EPA	CDPHE

Purpose of Contact: Excavation and confirmation sample depths at Pond Remedial Actions

Discussion

Top of sediment for pond remedial actions will be calculated based on the pre-remedial action sediment elevation at the edge of the ponds.

Excavation depths and depths for confirmation samples will be calculated based on the difference in elevation between the previously calculated top of pond sediment and sample elevation. Where this calculation results in a negative number results, such as where there was excavation of materials on the banks of the ponds or in upgradient stream channels, then an approximate depth of 1' will be assigned.

The accompanying sketch illustrates this strategy.

Contact Record Prepared By: Annette Primrose

Required Distribution:

M. Aguilar, USEPA
H. Ainscough, CDPHE
S. Bell, DOE-RFPO
J. Berardini, K-H
B. Birk, DOE-RFPO
L. Brooks, K-H ESS
L. Butler, K-H RISS
G. Carnival, K-H RISS
N. Castaneda, DOE-RFPO
C. Deck, K-H Legal
N. Demos, SSOC
S. Gunderson, CDPHE
M. Keating, K-H RISS
L. Kimmel, USEPA
D. Kruchek, CDPHE
J. Legare, DOE-RFPO
D. Mayo, K-H RISS
J. Mead, K-H ESS
S. Nesta, K-H RISS
L. Norland, K-H RISS
K. North, K-H ESS
E. Pottorff, CDPHE
A. Primrose, K-H RISS
M. Roy, DOE-RFPO
R. Schassburger, DOE-RFPO
S. Serreze, K-H RISS
D. Shelton, K-H ESS
C. Spreng, CDPHE
S. Surovchak, DOE-RFPO
J. Walstrom, K-H RISS
K. Wiemelt, K-H RISS
C. Zahm, K-H Legal

Additional Distribution:

T. Lindsay, K-H RISS
T. Hanson, URS
N. Elzinga, URS
G. Pudlik, K-H RISS

130

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
ER REGULATORY CONTACT RECORD

Date/Time: 12/29/04

Site Contact(s): Mike Keating
Phone: 303.966.4815

Regulatory Contact: Larry Kimmel (303.312.6659)
Elizabeth. Pottorff (303.966.6758)

Agency: US EPA/ CDPHE

Purpose of Contact: B Pond Confirmation Samples

Discussion

The following confirmation sample plan will be implemented at the B Ponds:

1. Confirmation samples (statistical) will be collected in the excavated area at the location shown as per the attached map. Bias samples (also shown on the map) will be collected in areas at the discretion of the Field Project Manager in areas that are not covered by the statistical sample, i.e. deep pockets of sediment, up gradient of B-1 in the drainage ditch, at the toe of the dam, etc
2. Confirmation sample analytes will include Radionuclides (gamma spec)
3. At 4 sample locations in each pond the following analyte group will be collected and analyzed: Radionuclides (alpha spec), Metals (6010), PCBs (8082), VOCs (8260), SVOCs (8270). The location of these samples will be as follows: 1 on each side of the pond, 1 on the up-gradient end near the entrance to the pond and 1 in the deepest part of the pond toward the down-gradient end. The alpha spec (off site) sample will be a QA sample and the other analytes are intended to be evaluated as part of the CRA.
4. Duplicate confirmation samples will be collected for EPA at a rate of 20 percent.

Contact Record Prepared By: Mike Keating, B Ponds Project Manager

---

Required Distribution:

M. Aguilar, USEPA
S. Bell, DOE-RFFO
J. Berardini, K-H
B. Birk, DOE-RFFO
L. Brooks, K-H ESS
M. Broussard, K-H RISS
L. Butler, K-H RISS
G. Carnival, K-H RISS
N. Castaneda, DOE-RFFO
R. McCallister, DOE-RFFO
J. Mead, K-H ESS
S. Nesta, K-H RISS
L. Norland, K-H RISS
K. North, K-H ESS
E. Pottorff, CDPHE
A. Primrose, K-H RISS
R. Schassburger, DOE-RFFO
S. Serreze, K-H RISS

Additional Distribution:

131

C. Deck, K-H Legal
S. Gunderson, CDPHE
M. Keating, K-H RISS
L. Kimmel, USEPA
D. Kruchek, CDPHE
D. Mayo, K-H RISS
D. Shelton, K-H ESS
C. Spreng, CDPHE
S. Surovchak, DOE-RFFO
K. Wiemelt, K-H RISS
C. Zahm, K-H Legal

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IHSS Group NE-1
Ponds B-1, B-2, and B-3
Proposed Confirmation Sampling Locations

11-01-04

Key

- Potential Statistical Confirmation Sampling Location
- Potential Biased Confirmation Sampling Location
- Demolished Structure
- Structure
- Asphalt
- Dirt Road
- Lake
- Stream
- Topography (2-ft interval)

2087000 2087200 2087400 2087600 2087800

751000 750800 750600 750400 750200

Pond B-1

Pond B-2

Pond B-3

N W E S

50 0 50 Feet

Scale = 1 : 1,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS Date: November 2004

Prepared for: KAISER•HILL COMPANY

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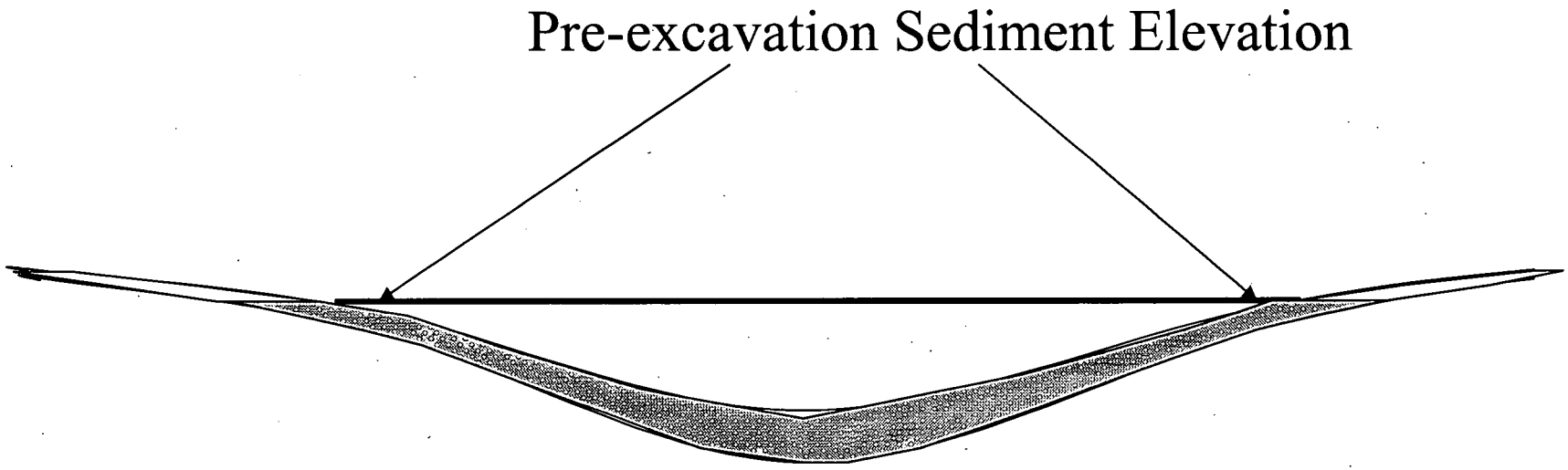
Proposed Method to Determine Excavation Depth at B-Ponds



Excavated sediment - depth calculated as distance below pre-excavation sediment elevation

Excavated material above established sediment elevation - depth set as an arbitrary 1 foot excavation.

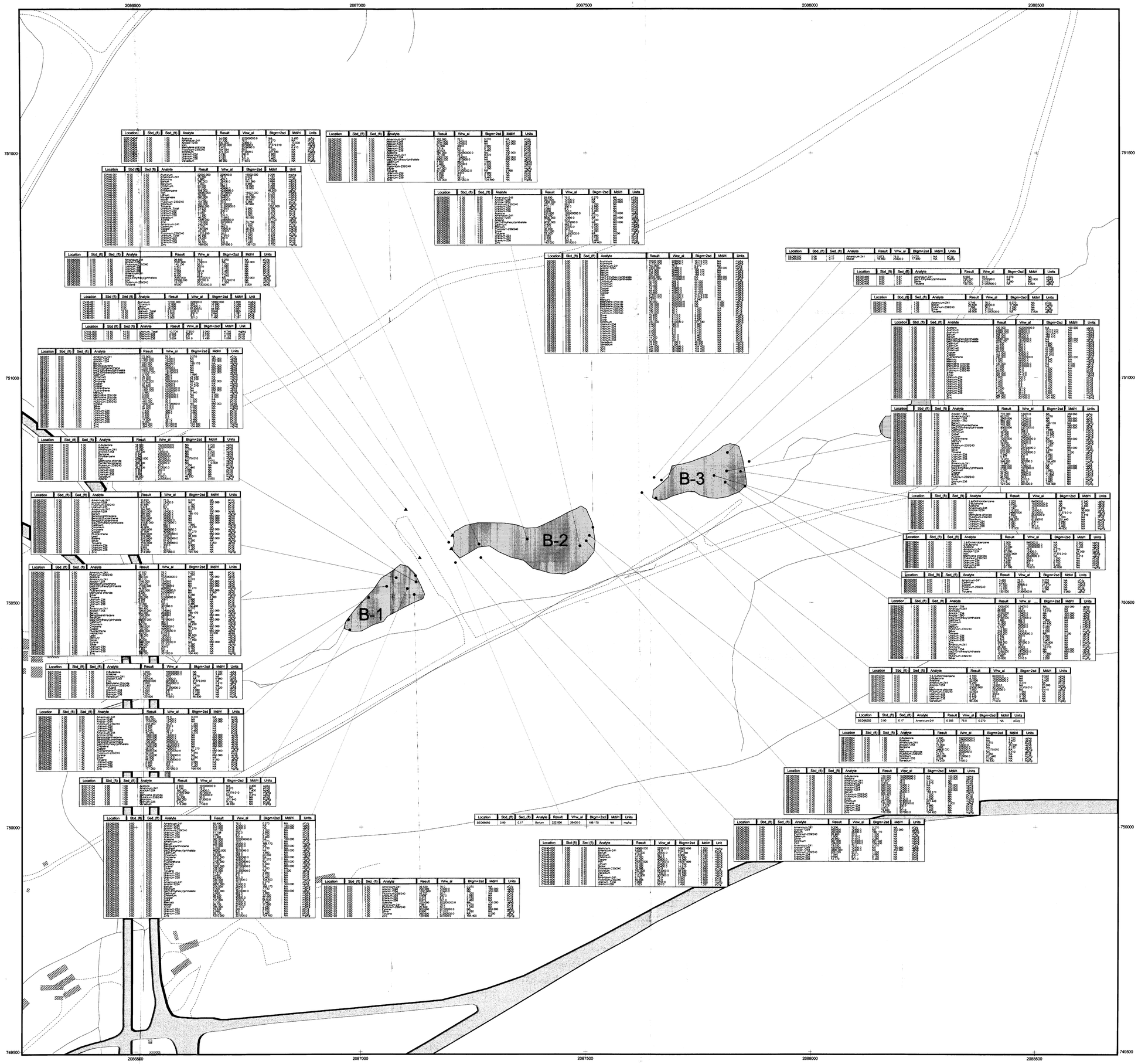
Note: Drawing not to scale

Enclosure

CD Containing Standardized Real and QC Accelerated Action Data

Figure 3

IHSS Group NE-1 (Ponds B-1, B-2, and B-3) Preaccelerated Action Sediment and Soil Sampling Results Greater Than Background Means Plus Two Standard Deviations or RLs



Key

- Sediment location with concentration greater than WRW AL
- Sediment location with concentration greater than background means plus two standard deviation or RLs
- Soil location with concentration greater than WRW AL
- Soil location with concentration greater than background means plus two standard deviation or RLs
- Pond
- Building/structure
- Demolished structure
- Paved area
- Dirt road
- Stream, ditch, or other drainage feature

N
W E
S

100 0 100 200 Feet

Scale = 1:875

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for: Date: 05-17-05

KAISER•HILL COMPANY

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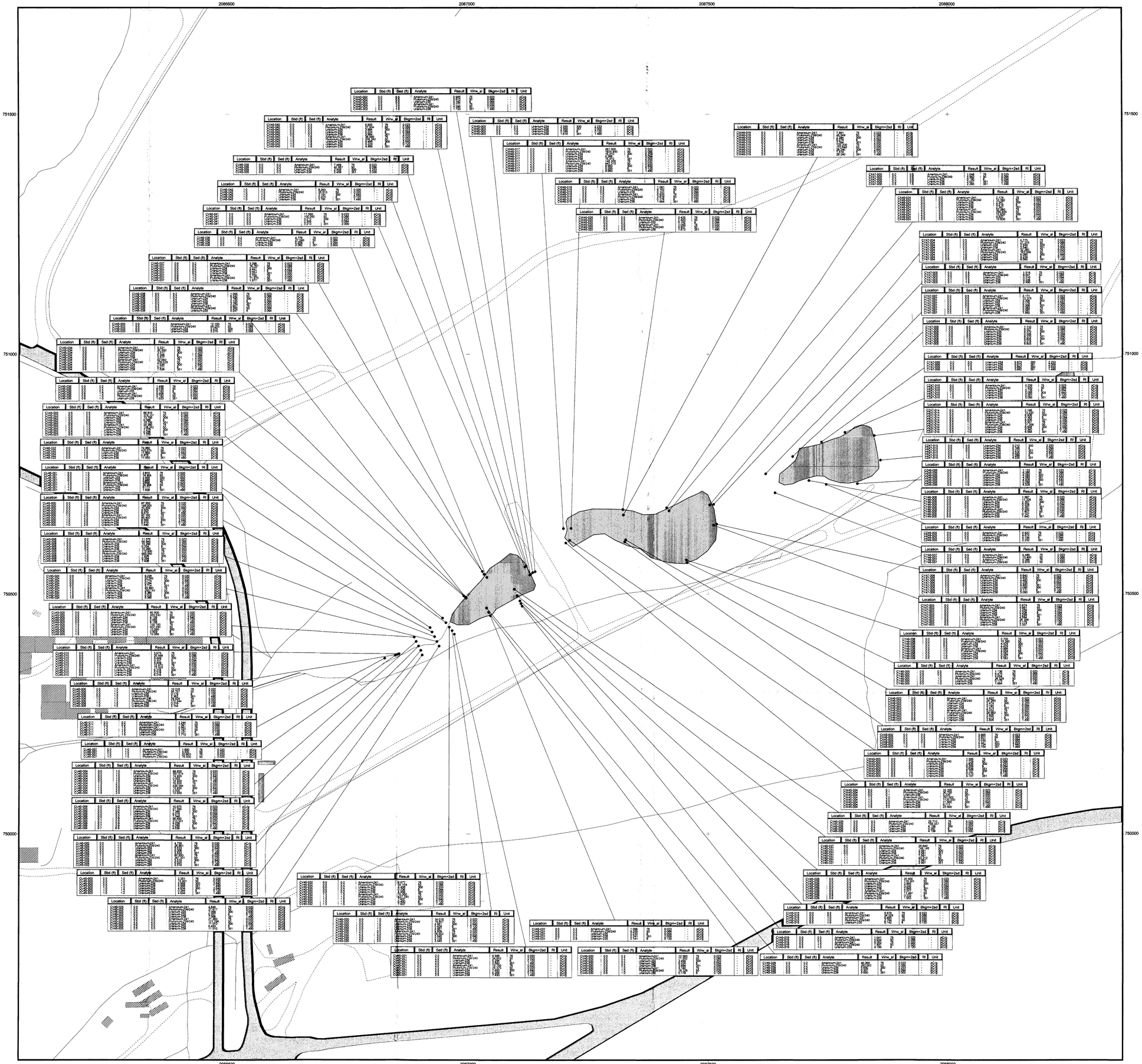

Figure 4

IHSS Group NE-1 (Ponds B-1, B-2, and B-3) Characterization Soil Sampling Results Greater Than Background Means Plus Two Standard Deviations or RLs

Key

- Location with concentration greater than WRW AL
- Location with concentration greater than background means plus two standard deviation or RLs
- Pond
- Building/structure
- Demolished structure
- Paved area
- Dirt road
- Stream, ditch, or other drainage feature

N
W E
S

100 0 100 200 Feet

Scale = 1:825

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

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Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for: Date: 05-17-05

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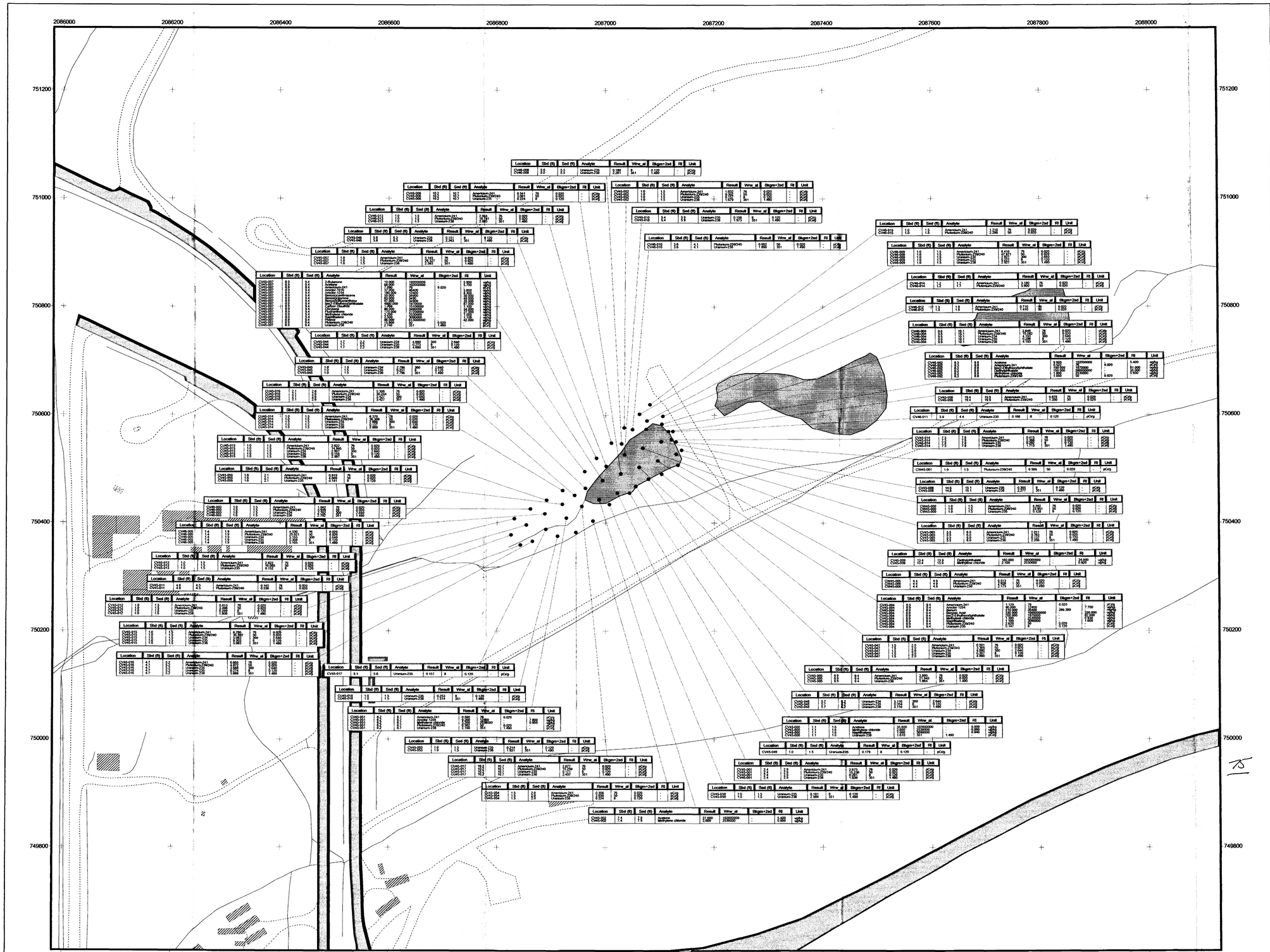

Figure 6

IHSS Group NE-1 (Pond B-1) Confirmation Soil Sampling Results Greater Than Background Means Plus Two Standard Deviations or RLs

Key

- Location with concentration greater than background means plus two standard deviation or RLs
- Pond
- Building/structure
- Demolished structure
- Paved area
- Dirt road
- Stream, ditch, or other drainage feature

N
W E
S

100 0 100 200 Feet

Scale = 1:1,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for:

Date: 05-17-05

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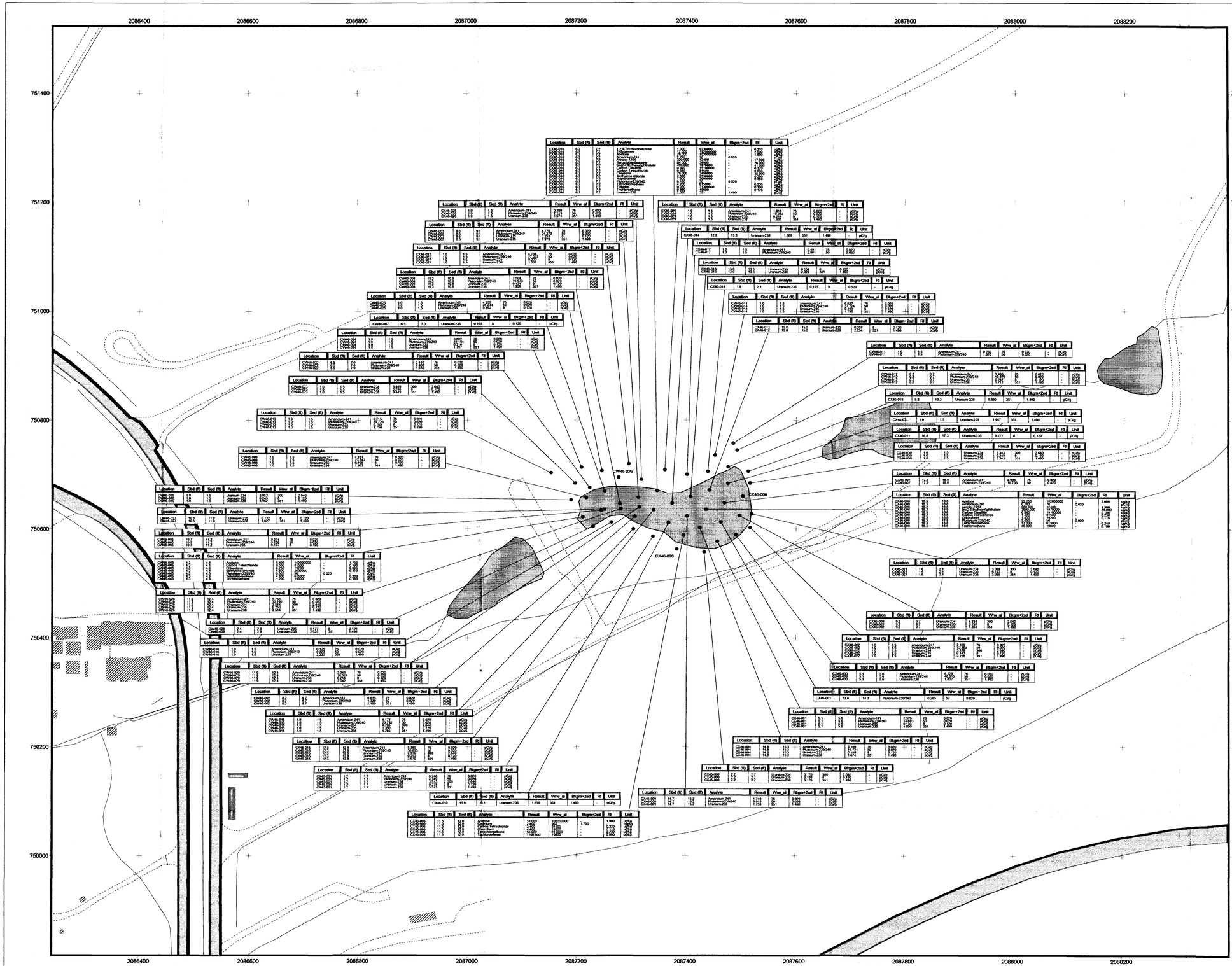

Figure 7

IHSS Group NE-1 (Pond B-2) Confirmation Soil Sampling Results Greater Than Background Means Plus Two Standard Deviations or RLs

Key

- Location with concentration greater than background means plus two standard deviation or RLs
- Location with concentration less than background means plus two standard deviation or RLs

Pond

Building/structure

Demolished structure

Paved area

Dirt road

Stream, ditch, or other drainage feature

N
W E
S

100 0 100 200 Feet

Scale = 1:1,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for:

Date: 05-17-05

KAISER•HILL COMPANY

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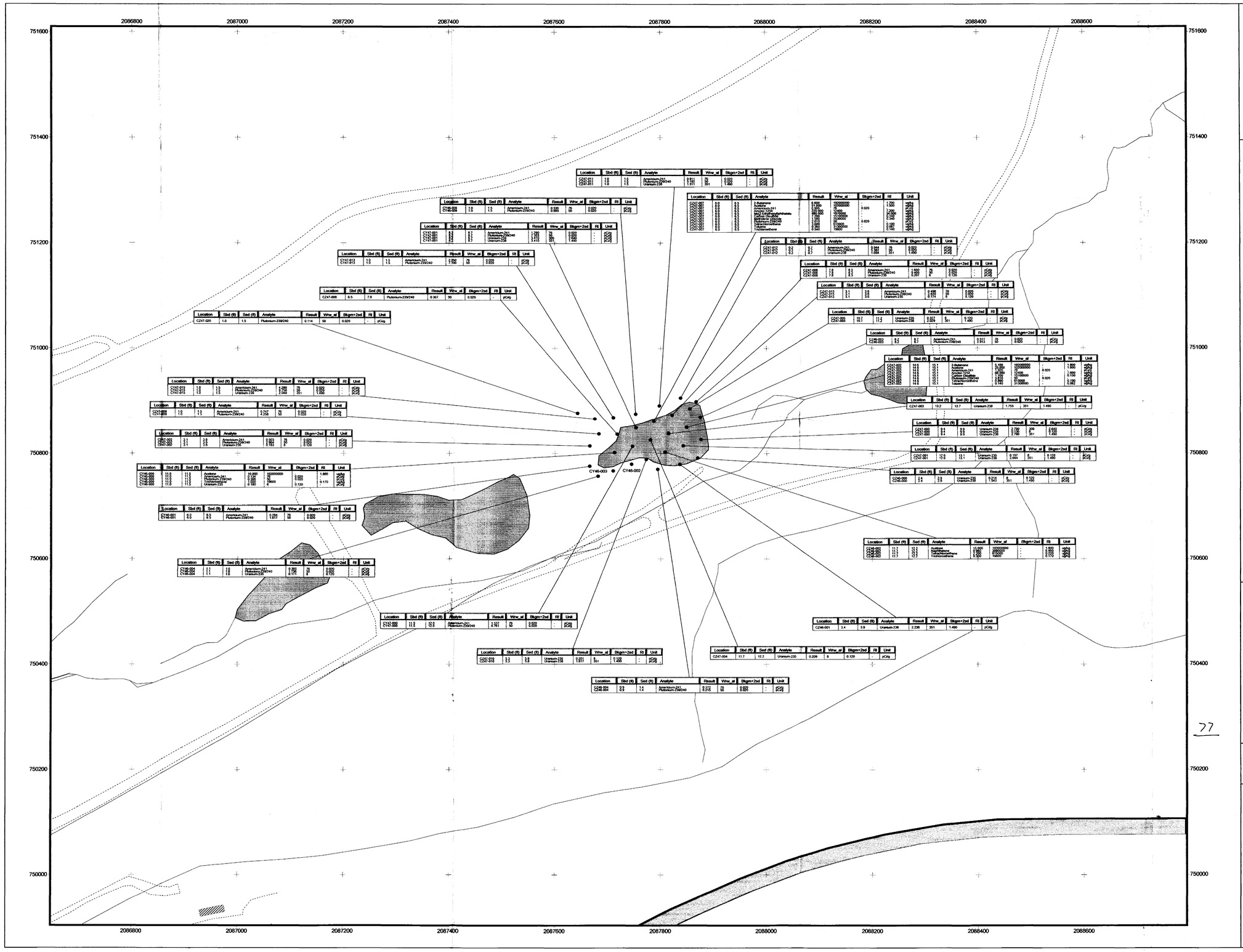

Figure 8

IHSS Group NE-1 (Pond B-3) Confirmation Soil Sampling Results Greater Than Background Means Plus Two Standard Deviations or RLs

Key

- Location with concentration greater than background means plus two standard deviation or RLs
- Location with concentration less than background means plus two standard deviation or RLs

Pond

Building/structure

Demolished structure

Paved area

Dirt road

Stream, ditch, or other drainage feature

N
W E
S

100 0 100 200 Feet

Scale = 1:1,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for:

Date: 05-17-05

KAISER•HILL COMPANY

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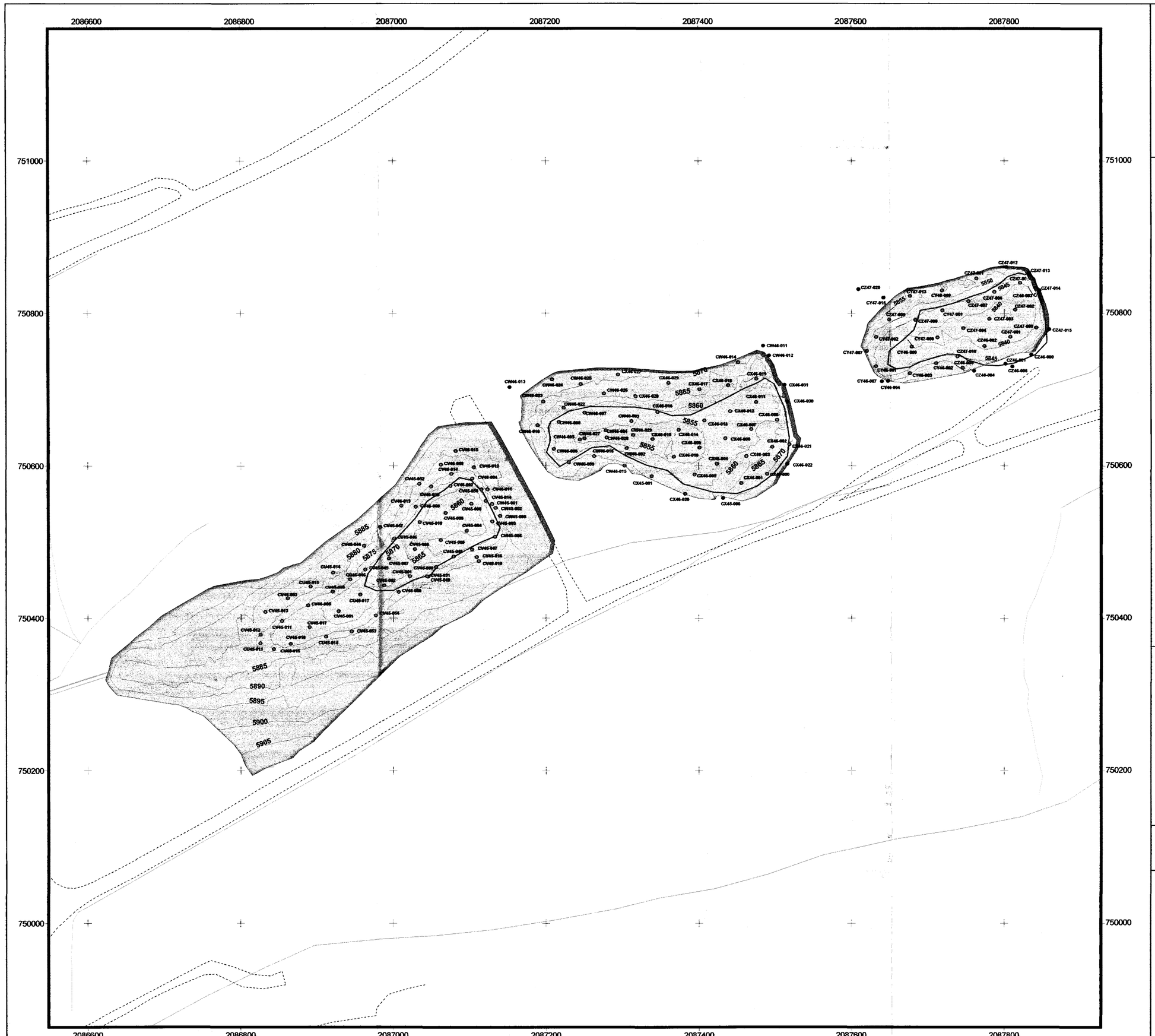

Figure 9

IHSS Group NE-1 (Ponds B-1, B-2, and B-3) Excavation Area/Topography and Locations of Residual Contamination

Key

- Residual contamination location (results less than WRW ALs)
- Excavation area
- Excavation topography (5-ft interval)
- Original pond boundary
- Dirt road
- Stream, ditch, or other drainage feature

N
W E
S

50 0 50 100 150 Feet

Scale = 1:1,000

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD 27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: RADMS

Prepared for:

Date: 05-17-05

KAISER•HILL COMPANY

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